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Second thoughts at the DES

10 to say that Mr Carlisle is beginning to get cold feet about his department's proposal to "nationalize" the polytechnics and colleges of higher education is going far too far. But ministers are beginning to have second thoughts about the plan. Even some of the responsible civil servants, once enthusiastic for a tidy, centralist, "New Model" system of polytechnics and colleges, have detected this whiff of ambivalence and have started to put a little distance between themselves and the proposal for a national body ("we simply presented options; ministers chose").

As a result a compromise is in the air. Cautious negotiations have started with the local authorities to see whether a less radical alternative can be devised that would be acceptable to both parties. Such an alternative would need to satisfy two conditions: it would not have to breach in such a politically controversial fashion the traditional demarcation line between central and local government responsibilities; and it would need to appear to be just as effective as the DES's original proposal in achieving the mandatory "rationalization" (in plain language cutting the system down to size by reducing opportunities for students and sacking teachers).

This modest show of flexibility on

the part of the DES and marginally more positive approach by the local authorities deserve one cheer—but no more. Certainly any compromise would be superior to the original DES proposal. This was doubly unacceptable. Not only would a DES-dominated national body be able to subject the polytechnics and colleges to the full effect of the present atavistic cuts in public expenditure, and guarantee that the consequent "rationalization" would be crude, botched and very very political; the plan would also mark the final burial of the binary policy, the liquidation of any lingering hope that the polytechnics and colleges might be able to open up higher education to the wider community.

But these twin dangers are likely only to be deflected not avoided altogether by any compromise reached between the DES and the local authorities in their present negotiations. Such a compromise could produce a national body almost as centralist as the DES's home-grown version. So long as considerations of political balance are nothing in the debate, the local authorities may be tempted to hang on to their prerogatives by agreeing to be more royalist than the king. After all, local authorities acting collectively could impose as stifling an orthodoxy as the

DES, and possibly with bayer purposes.

The danger today is that what should be a strategic debate about the whole future direction of the non-university sector (with profound effects on the development of the universities themselves) will never rise above a tactical debate about spheres of political competence and detailed questions of finance, administration and representation. Such a cramped debate assists no one. Even those who view higher education through the microscope of public expenditure constraints need a wider field of vision because for them the best solution might be to create a single national system of higher education under the guidance of the UGC.

For those who view higher education through the telescope of the expansion of opportunity for the individual and advantage for the community the need for a more principled debate is even greater. A great deal is at stake. In the vision of Anthony Crosland, it must be remembered, the polytechnics and colleges were to be the advancing frontier of higher education. Isn't it a little too soon in Britain to close down that frontier? Yet that could well be the almost accidental result of both the original DES plan and of any embryo compromise if the wrong balance is struck.

Dyer retreats to high ground

With its second discussion document on London University the Swinerton Dyer review committee has this week come out of its corner and named the colleges it would like to see merged or closed to enable the university to live within its means over the next decade. Westfield is encouraged to form a consortium with Bedford, Queen Elizabeth with Royal Holloway, or Imperial. Royal Holloway is advised to consider losing its natural sciences and Chelsea to purge many departments which, in the Dyer committee's opinion, do not meet the standards of the university.

For having the courage to name names the Dyer committee deserves some congratulation, although this is not to say that its prognosis for London is correct or even that the names it has selected are the right ones. The committee has clearly accepted the most

pessimistic forecasts for London and for higher education generally and its strategy is to retreat and consolidate on the high ground. Predictably, perhaps, it has looked for victims among the smaller multi-faculty schools and avoided antagonizing the big four—King's, Imperial, University College and the London School of Economics. By adopting this approach the committee is bound to sharpen the suspicions that have surrounded it since its inception. As a group of eminent scholars headed by an outsider the committee's decisions must not only be sound but also be seen to be sound. It is therefore unfortunate that many of its recommendations in the second discussion document appear to be based on *ex cathedra* judgments about academic excellence which are not supported by any evidence. The report concedes that most of its academic judgments have

been influenced by the general reputation of departments and the individual opinions of members of the committee.

This is not really good enough. The colleges whose vital interests have been put at risk by the committee's document would be entitled to demand something more substantial than "general reputation" as a justification for closure or amalgamation. The Dyer committee, of course, argues that a detailed academic review of the university's departments is beyond its scope and competence. If so, perhaps the way forward for London is to abandon the review committee and put more faith in its own decision-making procedures. They may not be any better able to reach the right answers, but they might at least result in decisions which are regarded as legitimate by those destined to suffer most.

Pooling plan pleases no one

No one expected that it would be easy to find a new method of distributing funds to colleges and polytechnics which would satisfy all the various interests. Moving from an open-ended system over such a short period was bound to create problems and it was understandable that last year's deliberations should have produced only interim arrangements on the road to something more sophisticated and equitable.

However, it was surely not unreasonable to hope that, with this experience behind them, the Department of Education and Science study group would produce a scheme for 1982-3 which would command general agreement and dovetail with plans for a national body.

Even the sub-group itself concedes that its recommendations could militate against those institutions which are making the most strenuous efforts to polytechnicise to escape cuts by recruiting more and more students, while acting as a possible disincentive to staff cuts because of an emphasis on nation-

al average ratios of teaching to non-teaching expenditure. Many in higher education might see both consequences as highly desirable, but they are hardly the purpose of the exercise and would have a devastating effect on morale in those institutions which, having made strenuous efforts to economize, find themselves penalized as a result.

It would also seem an extraordinary time to introduce arrangements which discriminate between colleges and polytechnics *per se*. Neither the DES nor the local authorities advocate doing so in their respective versions of the national body and it is surely impossible to produce the information necessary for a common system.

lower-paid while preserving external relativities.

In the jargon of collective bargaining, Naffine is to seek an *Ex-y* per cent increase. But it is the balance between these two components which will determine the relativities which so concern the APT—what will happen to the gap between polytechnic and university salaries.

The main union, which is deeply concerned lest APT should be introduced into the Burnham machinery like a maverick into a flock of sheep, has yet to take a decision on this question, but already stands tried and convicted in the eyes of its rival.

Laurie Taylor



Dear Vice Chancellor,
Thank you for your recent letter which you inform me that my services will no longer be required by the University from next Friday at five o'clock. This is of course a disappointment to me but I fully appreciate that the University letter leaves no other course of action open to you.

These are, as you say, difficult times for the university and you are right to believe that I will find some consolation in the fact that my involuntary redundancy coincides with that of 135 former colleagues and conversion of the present department premises into a Bernal School of Theoretical Physics.

Thank you also for enclosing an assessment form for the calculation of redundancy pay. I have now completed this and return it with this letter (Enclosure 1).

Finally, my very best wishes to you and your charming wife. I know my memories of the many little necessities you have shown me in these years will be a source of comfort in difficult days ahead.

Yours,
Arthur Gruttko (Dr)

REDUNDANCY PAYMENTS CALCULATION

Please answer all questions. Failure to give correct answers may lead to a grant reduction in award.

Q1: Please describe your present employment.
A: *Beowulf.*

Q2: Please describe any appointment held before your present employment.
A: *School prefect (Durham University), Member of (Three Year) Unit, (Second Year) Observer Race competition, 1976.*

Q3: Have you ever been offered an alternative employment?
A: *No.*

Q4: Anything at all?
A: *No.*

Q5: You're not kidding?
A: *No.*

Q6: Please detail any outside earnings in the last 10 years (give net amounts).
A: *Review in Times Literary Supplement of Derrida's *Of Grammatology*, 1973 - £5; *Televisual appearance on Deadline London* item entitled "Is Ole Leif teaching a load of cobblers?" interviewed by Austin Mitchell (now an MP), 1976 - £15.*

Q7: We have to ask some questions on your practical knowledge of the world. (This again will be of interest to prospective employers. Are you familiar with any of the following: (a) Space Invaders? Sorry, I have heard the name. (b) Karpis Factor? No. (c) Adam and Eve. Anns? I think not.

Q8: Which of the following tasks have you performed entirely by yourself in the last six months (a) *Beowulf* by bus. *Not really.* (b) *Beowulf* under screen wash on car? *No.* (c) *Getting dressed?* *Some slight help with shoelaces.*

Present age, 42.
Present salary, £12,300.

Now please estimate your redundancy pay by counting the number of years you have worked for the University adding two points each for a salary over £12,000 and an age over 40.

0-5: Might just get a job. Possibility of some outside earnings. Amount £20,000.

6-10: Unlikely to get a full-time job. Negligible outside earnings. Amount £35,000.

11-15: Totally unemployable. Possible need for home help. A word £75,000.

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Backing for European research fund

from Donald Fields

HELSINKI

A European Research Fund—which would launch new projects and coordinate work by scientists throughout Europe—has been backed by a Council of Europe conference. More than 200 delegates at the council's fifth parliamentary and scientific conference in Helsinki last week urged that a fund to boost vital fundamental research in Europe be established and they also called for "a more meaningful dialogue" between politicians and the European Science Foundation.

Lord Flowers, rector of the Imperial College of Science and Technology, believed the projected research fund could provide a mechanism enabling European scientists to communicate through official bodies. However, he warned that governments could be reluctant to back the scheme: "They might say they have already provided the money that science deserves. What the fund would need would be encouragement money. And I hope at least modest sums to launch joint European activity will be forthcoming."

In its final communiqué, the conference took some of the sting out of the fund proposal. It said that recommendations and any amendments would be examined by the Council of Europe's parliamentary commission on scientific and technological questions before submission to the plenary assembly. Such a cumbersome procedure may be offset by a new-found desire to pool the efforts of the Council of Europe, the EEC and the OECD. The overwhelming support for a comprehensive approach to research problems, and the key role accorded to the European Science Foundation.

During the three-day conference, held on an island near Helsinki, scientists and politicians alike expressed dismay at the lack of co-ordination in fundamental research throughout Europe.

Don't take grants for redundancy pay-offs, says UGC

by Ngaio Crequer

The University Grants Committee has rejected a Government proposal to divert equipment grant money to pay off redundant lecturers.

The Treasury, with some support in the Department of Education and Science, has been examining a scheme to earmark for redundancies part of the £70m a year given to the universities. They consider that about £10m will be necessary over the next three years to pay compensation, although the UGC itself has said that the total cost would be double that figure.

Vice-chancellors and the UGC have all said that the £20m so far made available for redundancies, early retirement and innovation is derisory.

But early in negotiations with Government the UGC rejected attempts to divert equipment grant funds, although the proposal has not been finally abandoned in Whitehall. Despite all the cuts, the UGC has managed in the last two years to maintain the real value of equipment grants. Their view is that basic research in the universities would become highly vulnerable if the equipment grant was cut and that this must be protected at all costs.

Ironically the Association of University Teachers was one of the organisations originally to suggest using equipment grant money for other purposes, but its council subsequently threw out this proposal.

Mr Rhodes Boyson, minister for

higher education, has said that he will look at all redundancy schemes put to him but that no decisions have been made.

The UGC will make final decisions on grant allocation to the universities at its June 18 meeting and then send out its letters as soon as possible after that.

Mr Neil Kinnock, shadow education spokesman, has asked Mr Mark Carile to abandon normal Parliamentary convention and to place the letters containing the advice for each institution in the House of Commons library.

"This is necessary," he has written, "because of the anticipated severity of reductions, the precipitate speed at which the reductions are to be made and the varying impact which both the amount and the pace of cuts will have on individual institutions... it is quite reasonable to require that MPs and the general public should be aware of how the UGC, acting now as a direct agency of the Government, considers that the money should be spent."

He notes the convention that ministers state that allocation of grant is entirely the responsibility of the UGC and distribution the concern of universities but "... this year the nature of the grants, the willingness of the UGC to apply the cuts prescribed by the Government and the important implications for individual institutions make it necessary to break the 'long-standing convention' in the same way that other established customs of the calculation and distribution of recurrent grant appear to have been broken."

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Report rejects centralised student grant control

A confidential report has effectively rejected central government control of university student grants despite the "superficial" advantages of taking the responsibility away from the local authorities.

Instead, Sir Derek Rayner has advised ministers that the best way to make the system more efficient would be for the smaller local authorities—particularly metropolitan districts—to pool their administrative resources in consortium arrangements. He admits that only a detailed feasibility study could show whether the "upheaval" of centralization would prove worthwhile.

"I could not recommend centraliza-

tion without reservation" he says. "It would seem that significant savings could, in theory, be achieved but that there is a real danger that an operation of the size required for England and Wales would run into management problems, and would employ large numbers of staff to train and supervise those actually doing the casework."

At present the 320,000 mandatory grants awarded in England and Wales are handled by the local authorities. All those Sir Derek spoke to claimed their staff were fully employed on awards work throughout the year; most found it necessary to work extra hours at peak periods and sometimes had to be rushed.

Continued on page three

FE unit attacks failure to achieve changes

by Patricia Santinelli

A damning indictment of the methods used by the Technician Education Council to achieve major curriculum changes in the further education sector is contained in a report to be published later this year, a confidential paper has revealed.

The paper summarizes a report commissioned by the Further Education Unit on the first evaluation of TEC ever undertaken. It took three years to complete and surveyed 78 colleges—a small sample of the total provision—and concentrated largely on internal curriculum issues.

It shows that the council not only failed to realize one of its major aims of changing teaching and learning

methods, but created additional problems for further education as well as consistently underestimating the demands it placed on the system.

Throughout the report and its conclusions, the paper says, is the persistent criticism that because of pressure of existing work, of time and lack of support, local curriculum development had to be rushed.

The report states that not only have there been "substantial changes in teaching methods but that the way TEC has used and validated objectives and assessment plans has put too much accent on what the students learn rather than how they learn. It advises colleges and TEC urgently to consider describing 'teaching and learning strategies in their development and



Flying visit from Daley Thompson

Olympic gold medalist Daley Thompson found time to inspect progress on the construction of a new sports centre at the University of Manchester Institute of Science and Technology before receiving an Honorary Fellowship. Yachtswoman Clare Francis, Jack Ashley MP, former UMIST graduates Sir Ronald Ellis and Dr Arnold Robinson, and chemist Dr Herschel Smith were also made Fellows.

Brain drain forecast

by John O'Leary

Graduates are facing a worsening employment crisis which could restart the brain drain among scientists. For the first time in 10 years the President of the Confederation of British Industry, Sir Raymond Penneck, has made a direct appeal to companies to maintain recruitment.

Members of the CBI received Sir Raymond's letter this week amid mounting evidence that the recession has finally worked through to the graduate market. The number of employers advertising vacancies with the main agency serving universities and polytechnics is half that of a year ago and regional recruitment fairs due to start next week will be reduced in size or duration.

The letter said: "This year it is increasingly necessary to draw the attention of members to the importance of maintaining a steady recruitment of graduate talent as a major source of able people for future years. The experience of the early 1970s showed the lasting harm which can be done by stop-go policies of recruitment."

Mr H. P. Pitt, chairman of the CSU, said that the resurgence in job opportunities hoped for after poor figures earlier in the year had not materialised and the unit's previous forecast of more graduates chasing the same number of vacancies was unlikely to be over-optimistic. However, the market for science graduates abroad was holding up.

Leader, back page

review of units and programmes.

The paper points out that many of the issues identified in the study are not unique to TEC or further education, but that on the other hand the council appeared to have created its own spectrum of problems by, for example, neglecting the Regional Advisory Bodies and the Regional Advisory Councils which in some cases were heavily involved in existing technician courses. This removed, initially at least, a source of local curriculum support for many teachers.

The report describes examples of the way TEC underestimated the demands it would place on the system in terms of consultations with employers, the complex and demanding administrative burden, the assumptions made in re-

spect of courses and the phasing out of existing courses which has left a residue of hostility.

The paper does however point out that in fairness to TEC the study essentially describes how a major curriculum project was on the whole accepted by colleges as an improvement.

But it also stresses that the report illustrates not for the first time the way curriculum development in further education is under-resourced.

"Sooner or later it must be realised that attempting massive curriculum change on the cheap is false economy. The price is eventually paid in terms of failure, expensive modification and non-productive hostility," it says.

David Jobbins reports from the Nalco university group conference in Blackpool

White-collar staff threaten pay strike

University white-collar workers may take industrial action if their employers fail to improve what their leaders have attacked as a derisory pay offer. Degree ceremonies and admissions procedures would be affected under plans to be considered by the leaders of nearly 20,000 secretarial and clerical staff at 43 institutions covered by the national agreement.

Last week the employers, under severe pressure from the six per cent cash limit for pay rises, offered between £3 and £9 a week from July 1 to the white-collar staff, who are the last to settle in the current pay round. The unions had claimed 15 per cent, a reduction in the working week, and an extra day's holiday.

Although the offer has been attacked by union leaders as the worst so far made to any group of public sector white-collar staff, it is the way it is distributed which angers them most.

For those at the top of the career structure stand to gain most, while the lowest paid would get least – as little as 8p an hour more for the minority on the bottom grade. National and Local Government Officers Association official Mr Alex Thompson said this contradicted the findings of the Clegg Commission that those at the lower end of the salary scale were worse off than those doing similar work in other industries.

The offer rejected by the unions

after two hours of talks last week represents 4.35 per cent for staff on the lowest grade and 6.7 per cent for staff carrying out executive duties. But a move at Nalco's universities group conference in Blackpool this week to protect the lower paid by tearing up the union's 15 per cent claim in favour of a flat-rate cash demand failed.

Instead the national universities committee accepted the spirit of a resolution calling for industrial action including overtime bans and a work to rule, with the ultimate threat of strike action if the offer is not improved before negotiations reopen on July 1.

For the committee, Ms Judith Crabtree described the offer as "derisory, disgusting and appalling." But she warned that it was important to examine the union's strengths and weaknesses before deciding what the most effective action would be.

The resolution was remitted to the committee, with only one vote seeking to drop the idea of industrial action completely. The group adjourned its meeting so that it could be reconvened to respond quickly to developments.

DETAILS OF THE OFFER				
Grade	Proportion of Employees (percentage)	Now	Offer	
One	12	£2674-£3686	£2730-£3741	
Two	44	£4288	£4580	
Three	31	£5005	£5317	
Four	11	£5854	£6166	
Five	2	£6884	£7482	

More calls for UGC to quit over cuts

White collar workers at universities have added their voice to the demands for the resignation of the University Grants Committee because of its response to the Government's demand for cuts.

A toughly-worded resolution calling for resignation and attacking the UGC for "promulgating Government policies of public spending cuts" was unanimously carried by the National and Local Government Officers Association universities section conference in Blackpool.

The group also called on local branches to consider pledging industrial action to support members sacked as a result of the cuts.

It endorsed united campus union resistance – but without expressing doubts over the Association of University Teachers because of alleged strike breaking during industrial action by Nalco members in 1979.

There was some severe criticism of some AUT members, and it was clear that co-operation hinged on the AUT's recent about-turn when its council decided last month to drop a demand for frozen posts as an alternative to cuts elsewhere.

"That is something we could not have gone along with," Mrs Rita Donaghy, chairman of the union's national universities committee, said. She attacked the quiescent attitude of the UGC and added: "We should have no faith in these people and should call

for a meeting in the near future to ask them why they have not resigned."

She warned against regarding the universities as a special case as the employers were arguing.

"As far as we are concerned, the cuts are wrong. They are politically stupid and they are unnecessary – and that is totally across the board."

"I am sure we would not want to fight the cuts at the expense of our polytechnic colleagues."

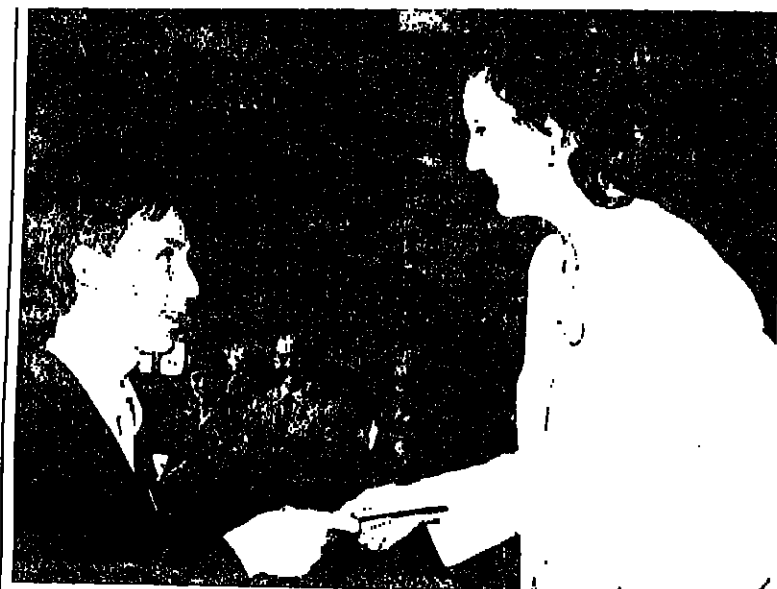
Nalco did not accept the need for redundancies, but she made it clear the union would fight attempts to offer better compensations to academics than to other university workers.

The Swinerton-Dyer report on the future structure of London University was also sharply attacked.

"Certain colleges are going to be made to suffer to maintain so-called centres of excellence," Ms Alma Gibbins said. She described Sir Peter Swinerton-Dyer, who chaired the Government's cuts.

Nalco president Mr Peter Morgan took up the "quiescent" theme when he addressed the full conference: "It seems intent on becoming hotter and our members must play the scapegoat."

"The scale of fees being exacted from foreign students is a national disgrace, pandering to the outlook of the National Front."



£1,000 award for Oxford writer

Oxford University lecturer A. N. Wilson collects the Somerset Maugham Award from actress Rachel Billington. Mr Wilson, who last year published a major work on Sir Walter Scott, won the £1,000 prize for his novel *The Healing Art*. Among the other winners at the Society of Authors' awards reception in London was Mr Ian Gregson, a lecturer in English at the University College of North Wales who took £500 in the Eric Gregory Trust Awards for young poets.

System turning out stuffed turkeys, says professor

Concepts of management should be taught as part of degree and diploma courses to ensure graduates use their knowledge effectively, Dr Ron Johnson, visiting professor of adult education at Surrey University said yesterday.

This applied particularly to science, technology and technical courses, he told the summer meeting of the Association of Colleges for Further and Higher Education in Scarborough.

The emphasis on research and the lack of recognition of practical results in our universities had distorted the entire education system.

From secondary schools onwards it was geared to producing young people like "stuffed turkeys, replete with academic subjects to produce a good 'paid' who far from having learnt to manage had been taught to be managed by their teachers."

"How much more effective scientists, for example, would be if they had learnt to cost their experiments," said Dr Johnson. "We need scientists, en-

gineers and technologists who think about time and space in terms of pounds sterling, not just in terms of Einstein's theory of relativity."

Courses did exist where efforts were made to include such concepts, but these were the exception. The real question was how could any course be regarded as adequate educationally, if it did not help people manage better.

Dr Johnson said the current problem for management schools in the public sector was that, on one hand, they tried to conform to the research-orientated criteria of academic and, on the other, to the pragmatic needs of people in organizations.

"They have been trying to ride two horses at once like the Cossack stunt riders. That's OK if you are good but it is undignified if you are not, and not the best posture for warfare."

What was needed was recognition of both approaches and the encouragement through greater rewards of more people who could work across the divide.

Move to widen options

A new attempt to broaden the field of employment opportunities considered by graduates was made this week at Sussex University. A conference organized by the university's Occupational Advisory Service encouraged students to consider self-employment or the establishment of co-operatives as an alternative to conventional careers.

Work in Progress is thought to be the first event of its kind in the UK. It was prompted by anxieties amongst the careers advisers about the high level of graduate unemployment expected this year.

"We were racking our brains to think what we could do to help the students," said Ginny Winstone, the conference organizer, "but then we had the idea of doing something on self-employment and co-operatives. We received support

both from the student union and from the staff at the polytechnic so we went ahead. Basically we are aiming to encourage those who might not have thought about self-employment to do so."

Mr Phillip Whitehead, the Labour spokesman on higher education, told the conference that students should be the catalysts for the setting-up of a new generation of co-operatives. Conventional graduate employment no longer offered real personal fulfilment, said Mr Whitehead. Instead, the way was now open for graduates – many of whom were going to be unemployed anyway – to become involved with minority groups like unemployed school-leavers and the handicapped in establishing autonomous working units.

The NUS also blames the MSC for paying for 154,000 people to be taken on by industry and commerce this year, supplying free labour where sandwich course students had filled in in previous years.

At Brunel University, which specializes in sandwich courses, two-thirds of the 1,800 science students looking for placements last Easter were placed quickly; the others had to accept work not relevant to their course.

Mr Peter Kitterman, training adviser at the university, said: "The real selves yet but it is becoming increasingly difficult to conjure up enough places for students."

Orthopaedic institute talks planned

by Ngalo Crequer

Talks are being arranged between London University's Institute of Orthopaedics and trade unions to settle a dispute about union recognition.

The institute, which is proposed to make 10 staff redundant and to have more posts in a reorganization, refused to recognize any unions, although it is considering a ballot of staff to discover their views.

Leaders of the Association of Medical Technicians, Technical and Managerial Staffs have considered taking industrial action to force the institute to join the Association of University Lecturers, the vice-chancellor's office.

It is understood that Lord Leake will write to all the medical schools and say that it is time to bring in the unions at an early stage when changes affecting staff are considered.

The AUT has also launched a recruitment campaign aimed at staff in institutes of the Postgraduate Medical School. And it is considering asking the House of Commons to examine the funds of the Institute of Orthopaedics, on the grounds of subsidizing work which is the responsibility of the National Health Service.

Last week all AUT members asked to leave a committee meeting at the institute, which was held in the month many AUT members were walking out when they were satisfied on questions about the redundancy plans.

The institute faces an estimated deficit of £120,000 for 1981-82. Proposed reorganization would mean the loss of 15 posts, plus the eight which are at present under the 15, three staff will retire and two will retire prematurely and be made redundant, at an estimated cost to the institute of £20,000.

Based on an estimate by the institute that they would pay double the normal amount of redundancy pay.

Under the plans, the cost of redundancies and premature retirements would be met by Government redundancy funds and, in the meantime, by the institute's BPHM.

The Royal National Orthopaedic Hospital is to carry out a review of pathology services provided by the institute, with a view to the hospital taking a greater share, but the redundancies are ahead nevertheless.

Improvements in pre-registration training for medical graduates are required, despite recent developments in organizing house posts, a Cambridge University education researcher Richard Wakeford is told.

The survey, published by the Teacher, points out that in the past there has been considerable faction among medical graduates about their one-year period of officer posts. In his survey of graduates from Cambridge, Oxford, School, Mr Wakeford concludes the house year "is now nearer the mark with regard to there being appropriate time to study and consolidate medical knowledge, to practise the basic skills of history-taking and examination and to learn basic administration skills."

But he adds that almost half the students thought there was insufficient opportunity for critical discussion, diagnosis and patient management, also perceived a lack of teaching by consultants.

In general, most students in the survey said their workload was heavy, although most found this a satisfying experience.

Frequently, posts were better expected, Mr Wakeford adds. There were no longer so many complaints about overwork and adequate time to study, as revealed earlier research into pre-registration posts.

More talks on Social Sciences Academy

by Charlotte Barry

Senior academics have decided to press ahead with plans to set up a British Academy of the Social Sciences.

At a meeting in London last week representatives from more than 20 learned societies in the social sciences appointed a working party headed by former British Sociological Association president Professor John Eldridge, of Glasgow University.

The eight-strong group is to produce a paper by the autumn which will lay out the possible structure and function of the new body. These proposals will be discussed in detail by the learned societies before the next full meeting of interested parties in December.

The decision to go ahead with plans for a new British Academy was only reached after lengthy debate among the 40 social scientists.

Objections to the proposal, led by the Oxford-based anthropologists, centred on the relationship between the new organization and the Social

Science Research Council, which strongly backs the idea.

Doubts also concerned the problem of heterogeneity in the social sciences which leads to too many different levels of status and power between disciplines.

The meeting overwhelmingly rejected arguments put forward by representatives of the Political Studies Association that a British Academy of the Social Sciences should be concerned with only academic issues.

It decided to give the new organization a strong political role so it could promote the interests of the social sciences in times of cut-back and opposition.

The structure of the new body remains undecided. Members of the meeting were unable to agree whether it should be modelled on existing organizations like the Royal Society and British Academy, or whether it should develop its own alternative and less elitist model.

Dental school deans agree savings package

by Robin McKie

Science Correspondent

Deans of London's dental schools have agreed to a package of measures to cut their annual expenditure by 10 per cent. Their recommendations call for a reduction in staff-student ratios and the merging of some of the city's six dental schools.

The move was agreed at this week's meeting of London University's joint medical advisory committee and will be considered by the joint planning committee next week. The decision was taken by JMAC following presentation of the report of the working party on dental education which highlighted seven options for closing deficits.

None of these options was considered by the committee and instead a package of proposals put forward by the dental deans was accepted. These recommendations should cut almost £800,000 from London University's dental education bill if finally accepted by Senate.

The first part of the deal proposes that staff-student ratios be cut at pre-clinical schools from 1.7 to 1.10 and at clinical schools a maximum level of 1.5 should be enforced. Most schools are already below this figure except London hospital dental school which has a ratio of 1.4.

It was also agreed that the dental schools should form an association to share teaching for subjects with small departments, although it was recognized this would not save any money.

The third part of the deans' package called for the setting up of a feasibility study to investigate merging some of the six dental schools – Guy's, King's College hospital, London hospital, Royal Dental hospital, University College and the preclinical school at King's College in the Strand.

The study working party would be made up of the dental deans under the leadership of an independent chairman and would be expected to report by the end of this year. The mergers would be expected to save half of the required savings, with the rest coming from the proposed reduction in staff-student ratios.

The first part of the deal proposes

vacation, instead of 10 p.m., after being told by the university to cut two per cent off its 1981-82 budget, and prepare to cut five per cent off its 1982-83 budget. It will also freeze nine staff posts out of 680.

All university departments, including the Bodleian, were officially instructed last month to make savings in preparation for a loss of up to six per cent in the university's £45m annual budget next year.

Dons however see the measures as a serious restriction on academic study and research at Oxford. Mr Creaser said the cuts were just too severe.

The Bodleian has decided it will open at 10 a.m. instead of 9 a.m., and close at 7 p.m. in term and 5 p.m. in vacation.

Mr John Creaser, senior tutor of Mansfield College, heads a list of 245 dons who have put their names to a motion to be debated in Congregation, the university's parliament, on June 30 attaching the reduced opening hours as "unacceptable".

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The survey, published by the Teacher, points out that in the past there has been considerable faction among medical graduates about their one-year period of officer posts. In his survey of graduates from Cambridge, Oxford, School, Mr Wakeford concludes the house year "is now nearer the mark with regard to there being appropriate time to study and consolidate medical knowledge, to practise the basic skills of history-taking and examination and to learn basic administration skills."

But he adds that almost half the students thought there was insufficient opportunity for critical discussion, diagnosis and patient management, also perceived a lack of teaching by consultants.

In general, most students in the survey said their workload was heavy, although most found this a satisfying experience.

Frequently, posts were better expected, Mr Wakeford adds. There were no longer so many complaints about overwork and adequate time to study, as revealed earlier research into pre-registration posts.

Mr Peter Kitterman, training adviser at the university, said: "The real selves yet but it is becoming increasingly difficult to conjure up enough places for students."

Mr Phillip Whitehead, the Labour spokesman on higher education, told the conference that students should be the catalysts for the setting-up of a new generation of co-operatives. Conventional graduate employment no longer offered real personal fulfilment, said Mr Whitehead. Instead, the way was now open for graduates – many of whom were going to be unemployed anyway – to become involved with minority groups like unemployed school-leavers and the handicapped in establishing autonomous working units.

The NUS also blames the MSC for paying for 154,000 people to be taken on by industry and commerce this year, supplying free labour where sandwich course students had filled in in previous years.

At Brunel University, which specializes in sandwich courses, two-thirds of the 1,800 science students looking for placements last Easter were placed quickly; the others had to accept work not relevant to their course.

Mr Peter Kitterman, training adviser at the university, said: "The real selves yet but it is becoming increasingly difficult to conjure up enough places for students."



Red Grooms' The Burning Building – the "happening" which helped begin the craze for impromptu artistic events when it was first performed in New York 21 years ago – has been revived by fine art students at Leicester Polytechnic. This work was produced by art historian Robert Ayers, who is writing a book on Happenings.

NHS facility charges for foreign students postponed

by John O'Leary

Charges for the use of National Health Service facilities by overseas students and visitors will not now be introduced this year. An announcement that the timetable for new regulations has been put back is expected soon in the Commons.

Although ministers remain determined to carry through their promise to charge all those whose home countries do not have reciprocal arrangements with Britain, practical difficulties in operating a new system are forcing a postponement. Opponents of the scheme are optimistic that this will be the first step to its abandonment.

Already Dr Gerard Vaughan, the Minister for Health, has made one concession, reinstating an earlier pledge that student nurses would be

exempted from any charges. He told a delegation from the United Kingdom Council for Overseas Student Affairs that proposals to the contrary in a consultative letter on the subject would be reversed.

The Government is especially concerned that the risk of damage to race relations as a result of the involvement of ethnic minorities who do qualify for free treatment should be minimized. Extra time will be taken in trying to find a simple and effective system of identification.

Final proposals are now likely to be tabled by the Department of Education and Science in the autumn for implementation in the New Year. Consequently, students enrolling for courses in 1981 are certain to be exempted for at least a year.

Catholic Merger speeded up

Scotland's two Roman Catholic colleges, Notre Dame and Craiglockhart, are to merge, the Scottish Secretary Mr George Younger announced this week. The Government move is seen as breaking the six-month deadlock between the colleges which have been unable to agree on how to merge. The talks between them have been going on since the Scottish Education Department decided at Christmas not to pursue the possibility of Craiglockhart merging with a non-demonstrational institution.

The two colleges now hope that they will hear within the next few days what each of their intakes for next year will be. Until now, the Scottish education department figures have been for a composite Catholic intake.

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London cuts 'not enough'

by Ngalo Crequer

There were private indications this week that University Grants Committee proposals for London University will differ significantly from those already made by an internal committee on rationalization.

It is understood that the UGC, which was given a private briefing on the proposals made by the Swinerton-Dyer Committee on academic reorganization, was disappointed that they did not go far enough. The UGC had held back on some of its plans for London in the light of the internal inquiry but it is known to want far more wide-ranging cuts among the colleges, and not the effective closure of at least one, as Swinerton-Dyer proposes.

This week the Senate the lecturers and the students at Chelsea pledged their outright resistance to Swinerton-Dyer. The committee said that except for three named areas it was not confident about Chelsea's work and that departments not up to standard should be phased out.

The Association of University Teachers will lobby the university court at its meeting on July 8. Four unions at London, the AUT, the Association of Scientific, Technical and Managerial Staffs and the National Union of Public Employees, which together represent almost all staff, have written to the Greater London Council calling upon its support to resist any cuts at the university.

The Chelsea Senate has decided to seek the collaboration of other smaller colleges to produce constructive alternative on academic organization.

They have written to Lord Annan, the vice-chancellor, to say they utterly reject the recommendations and to question the validity of the academic judgment of the committee "which appear to have no sound basis but have already done incalculable harm to the college's reputation".

Local authorities should have a duty to provide education for all 16- to 19-year-olds who seek it and could benefit from it, a working group has decided. But members of the joint central and local government working group are split on whether local education authorities should have a power or duty to provide adult education.

The division is revealed in the final report of the Further Education Legal Basis Group (FELB) which is to be published next week. The group has been considering changes in sections 41 and 42 of the 1944 Education Act which would strengthen the law on further and adult education.

The FELB report concludes that students aged 16 to 19 should not be able to insist whether they attend a school or FE college. In order to give them more choice of course and institutions, automatic "free trade" arrangements between authorities should be extended to this sector.

The report admits that there was a clash between local authority representatives within the group over legal changes regarding adult education, and provides no single recommendation.

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Boards pose 'threat' to adult exams

by Charlotte Barry

Thousands of adults will lose the chance of gaining a qualification if GCE examining boards are grouped into regions, the National Extension College has predicted.

These new arrangements for 16+ exams will aggravate the problems of adult external candidates who already have difficulty in finding an examining centre. But the Department of Education and Science and the examining boards are failing to take the issue seriously, the college says.

Adult candidates tend to follow GCE courses run either by a correspondence college or broadcasting authority and the exams can be taken throughout the UK.

A move to regional groupings by the examining bodies would have a damaging effect on adults who moved house or job, according to the NEC. Where different syllabuses were used, they would have major difficulty in continuing the course.

Mr Richard Freeman, director of the NEC, said: "So far both the DES and the Government have failed to appreciate the seriousness of the private external candidate issue and have framed policy solely from the point of view of the schools."

"This may not be big business, but it is important from the point of view of human rights. People who leave school early have the right in later life to gain qualifications and society is wrong to stand in their way."

The college has asked the DES to provide a national syllabus for external GCE students, wherever they may live. It suggests this could be done by asking one examining body to assume responsibility, using the other boards as its agents.

At the same time the Government should consider with urgency the need for an alternative exam system for adults, the NEC says. This should be designed to link the work of adult literacy and basic education, TOPS courses and return to learning programmes with the further and higher education system.

This would avoid, at the earliest level, adults being required to write an essay on the school holiday in the English exam.

OU bursaries for women engineers

The Open University is offering 50 Government-funded bursaries to women engineers who want to return to work after having children.

The £23,000 project, which is being financed by the Manpower Services Commission, is aimed at women from technician level upwards who want to update their knowledge and skills in electronics, telecommunications, design, systems, computing, control engineering and applied maths.

Students on the degree level courses, which are part of the OU's associate student programme, will also get counselling and career guidance; a preparatory weekend at Loughborough University; and a summer school for intensive laboratory and tutorial work.

The project's co-ordinator, Mrs Ailsa Swarbrick of the OU's Yorkshire office, said they hoped to attract women who already have an engineering qualification, some work experience and who intend to return to employment in two or three years' time.

She said: "The unfortunate fact is that at present much of the available engineering talent in each generation is being lost because we cannot provide paths back to work for women who also want families."

"The Finiston report lamented the fact that less than one per cent of British engineers are women. Now we have got to tackle the problem so that, even if women have a break in their careers, there is an established road back into engineering when they are ready for it."

CNAA reviews under fire

by Paul Flather

Institutional reviews carried out by the Council for National Academic Awards are "impractical, unreal, impertinent, and unprofessional", and also contrary to the council's own charter, an Oxford don, a member of the CNAA since 1967, said last week.

Mr Christopher Ball, warden of Keeble College, said in the Thames Polytechnic annual lecture that the development of institutional reviews had been a mistake.

Speaking just hours before he himself set off on an institutional review, he said it was extremely difficult to find any justification for the notion of approving institutions in the CNAA's charter and statutes, although there were plenty of references for the approval of courses.

"At a time when the emphasis and impetus of the council's work is apparently moving away from the subject boards towards the committee for institutions, I draw attention to the obvious constitutional validity of relying on institution-wide reviews for the fulfilment of the council's aims," he said.

Mr Ball, who is also a member of the CNAA committee for institutions, made clear his heretical views were in no way a criticism of those academics

involved in reviewing institutions. "They work far beyond the call of duty," he said.

But institutional reviews were impractical because a committee meeting six times a year could not possibly evaluate the health of 150 colleges and polytechnics. "The sheer weight of work makes such a system (desirable though it might be) administratively impractical."

The system was unreal because institutional reviews were based on a bad analogy with course approvals: while courses could be refused approval, Mr Ball said he doubted if it was really possible to refuse approval of an institution.

The reviews were impertinent because it was either arrogant or absurd for a group of people, however carefully selected or well intentioned, to descend on a complex institution and expect after one day's short work to arrive at a satisfactory verdict on the whole institution.

Finally the reviews were unprofessional because no one could be an expert on institutions. "Institutional review visits are necessarily conducted by amateurs, and run the inevitable risk of seeming to be merely amateurish."

Mr Ball argued that institutional reviews should be abandoned by the

CNAA in favour of "unlimited institutional approval" except when vetting entirely new colleges; when called in as an external advisory service by a college or polytechnic; and as a final option when CNAA subject board visits to an institution resulted in a string of unfavourable reports.

If the council had made any contribution to the "advancement of education" in its short life it had been primarily through the work of the subject boards, and Mr Ball urged that the spotlight inside the CNAA be switched back to the boards.

The responsive nature of the subject boards had been an essential feature of CNAA work. "The result has been an astonishing range of pioneering courses exploring new ground in syllabus content, course design, examination arrangements and in many other aspects," he said.

Subject boards had also been successful because they had followed the principle of "validation by peers".

He said that if the new system of partnership in validation encouraged institutions to take greater responsibility in maintaining standards it was to be welcomed. Mr Ball ended by saying the CNAA of being "too shy for its own good", and for not applying the principles of validation to its own work.

The slow path to a PhD

by Robin McKie

Major discrepancies in the completion rates for Science and Engineering Research Council-funded PhD theses are revealed in the council's latest bulletin - with those in the social science category coming out for the worst.

Out of the 101 students who started their theses in 1974 and 1975, only 59 have so far been awarded their PhD. A total of 36 still have to complete theirs, which means that 40 per cent of students have so far abandoned or have had rejected their PhD theses.

In other subject areas, the rejected abandoned rates were: biology, 8 per cent; chemistry, 7.5 per cent; physics, astronomy, 22.5 per cent; and engineering, 14.5 per cent.

However, the SERC bulletin was that these different category theses were not precisely defined, as students have been allocated largely according to departmental title. "Thus physics includes nuclear physics and astrophysics students working in departments of mathematics or physics are entered against these headings," the bulletin states.

The SERC figures also reveal that the student with first class honours degrees starting PhDs in 1974 or 1975, a fraction of 9 per cent have so far abandoned or had rejected their theses.

	Students notified	Awarded PhD	Thesis still in progress
Aberdeen	30	23	7
Aston	100	88	12
Birmingham	101	84	17
Bath	36	30	6
Bradford	77	33	44
Bristol	147	105	42
Brunel	23	12	11
Cambridge	206	248	58
City	25	14	11
Durham	55	30	25
Edinburgh	46	27	19
Essex	30	12	18
Exeter	49	25	24
Gloucester	69	44	25
Heriot Watt	38	22	16
Hull	43	24	19
Imperial	37	26	11
Lancaster	37	26	11
Leeds	185	101	84
Leicester	55	40	15
Liverpool	124	80	44
Manchester	29	15	14
ICST	197	115	82
QEC	34	35	1
QMC	53	32	21
RHC	26	18	8
Sheffield	84	37	47
UMIST	85	48	37
Manchester	189	102	87
Newcastle	72	35	37
Nottingham	136	88	48
Oxford	204	142	62
Reading	46	19	27
St Andrews	31	17	14
Sheffield	82	37	45
Southampton	122	91	31
Strathclyde	108	66	42
Stirling	94	46	48
Surrey	43	22	21
Sussex	104	66	38
Warwick	48	30	18
Wales-Aberystwyth	46	24	22
Wales-Bangor	42	20	22
Cardiff	63	37	26
Swansea	80	35	45
Polytechnic of CTA	113	47	66

Hull starts new placement venture

An international celebration was under way at Hull College of Higher Education last week as the first stage of an ambitious pan-European project received final approval.

In only the second course of its kind in the country, 30 British and 30 German students will share classes and industrial placements in a new BA in European Business Studies. The council for National Academic Awards has given its approval for the course to begin this autumn at Hull and the Fachhochschule, Münster.

Pictured from left to right are Professor Gerhard Dabrowski, who will lead the course in Münster, Professor Peter Westerheide, Mr Kinnear, Mr Duncan Hancock, Professor Helmut Kobelt and Professor Günter Pels.



Olga Wojtas reports from the Educational Institute of Scotland

Third of students face unemployment

A third of the secondary students leaving Scottish education colleges this summer will be unable to find jobs, the Educational Institute of Scotland, Scotland's largest teaching union, heard at its annual conference.

Mr Keir Bloomer, convenor of the EUVU committee on falling rolls, told delegates that the position for intending primary teachers was infinitely worse. "Around 700 teachers will be coming out, to whom must be added 1,100 teachers on temporary contracts and 1,000 on the dole. The total number of jobs in the primary sector in August is likely to be 35," he said.

"This is not merely incompetence and folly, it is wickedness that these

young people should be rejected and thrown on the rubbish heap," Mr Bloomer suggested it was a "cynical choice" on the Government's part to prefer to pay people a grant for a year to paying them dole money.

The estimated numbers of jobs available had first been revealed two days earlier at a meeting of the General Teaching Council of Scotland, which advises the Scottish Secretary on teacher supply.

Dr Tom Bone, principal of Jordanhill college of education, said around 700 secondary graduates would be unable to find jobs. "This situation represents the gravest personal disappointment to young people who

have spent their time qualifying as teachers," he said.

The GTC had taken steps to advise on a reduced intake to colleges, said Dr Bone, but particularly in primary training, it took time to have an effect.

However, prospects for young graduates must be improved as it seemed likely that local authorities would encourage early retirement for teachers over 54. Two authorities had already initiated this, said Dr Bone.

"We are hopeful that this scheme might lead to quite large numbers of young teachers being taken on in schools, because we are quite concerned about the lack of fresh blood in the profession," he said.

Row over YOP booklet

by Patricia Santinelli

A dispute has broken out between the two local authority associations over allegations that one of them turned down an opportunity to be involved in a joint Manpower Services Commission project.

The allegations against the Association of County Councils were made last week by the Association of Metropolitan Authorities during a joint MSC/AMA conference to launch a booklet on the Youth Opportunities Programme and The Local Authority, which resulted from the project.

Now Mr Alistair Lawton, chairman of the ACC's education committee, has issued a statement to counter what he regards as unwarranted and untrue criticism of the association.

"Neither I as chairman of the ACC education committee, nor the association was invited to take part," he said. "We were informed of the MSC/AMA working party after it had been established and assumed that for political reasons AMA members wished to

keep this an AMA/MSD document."

At the AMA, where the whole matter is being described as a storm in a teacup, a spokesman said that as far as they were concerned the ACC had been invited by the MSC before Chisholm, but had chosen not to participate.

"It is a pity that what we regard as a useful booklet which will be read widely is in danger of having its value diminished over an argument of this kind," the AMA said.

The AMA's accusations are in fact supported by the MSC, somewhat puzzled as to the whole development. A spokesman there pointed out that the AMA had originally approached the commission suggesting the publication of a booklet. Following this and before the setting up of a working party, the ACC was invited along but had declined.

"However, we should like to make it absolutely clear that we would welcome a similar initiative with the ACC, should they now express an interest," the spokesman said.

Pay freeze urged to save jobs

by Olga Wojtas
Scottish Correspondent

Senior staff at Strathclyde University have been warned by their principal that they may be asked to accept a pay freeze to save threatened jobs if cuts are applied equally among the universities.

Dr Graham Hills writes in the university's Gazette: "The universities will continue to protest that they deserve special treatment, that they are not Linwood, but the seed corn, the quintessential part of the civilization we are supposed to be promoting. The fact is we are an integral part of society and we have to share its ups and downs."

The assertions that tenure was a God-given right, that research was essential and progress inevitable, were nothing more than a "fashionable residue of the expansive optimism of the renaissance which may itself have reached its plateau."

If the universities suffered selective rather than uniform contraction, then Strathclyde would survive as Scot-

land's premier engineering and business university.

But if the cuts were uniform, it might have to consider radical changes such as senior staff agreeing to forego salary increases to avoid redundancies, increasingly unacceptable staff-student ratios, different curricula and fewer lectures.

"Of course it may not come to this," says Dr Hills. "With better management of our national affairs we may well reverse the recession a little. It is even possible that there could be a shift in public investment from weaponry to ploughshares, although in recorded history that has never happened."

The Scottish Liberal Party has called for a commission under an independent chairman to be established to co-ordinate the Scottish universities' response to the University Grants Committee cuts expected later this month.

In a letter to the Scottish Secretary, the party executive suggests the commission's membership should include the eight university principals and "an equal number of leaders from the

industrial, legal, financial, property, administrative and educational aspects of Scottish life."

It would be undesirable, says the letter, for universities to face the crisis individually, or even as a group isolated from the tax-paying community as a whole.

The Scottish Liberals criticize the prospect of further cuts as "an entirely new curtailment of university freedom, a step which many will see as a move down the road to centralization, nationalization and even political control."

The executive warns that inter-departmental and inter-university rivalries could play havoc with the whole process of contraction, and the whole of the tertiary sector could be thrown into a state of chaos and demoralization from which it would take years to recover.

A commission could agree on a Scottish reaction to the cuts "and formulate such measures of rationalization as might not only minimize the effects of the cuts, but even increase efficiency."

Training cost plan attacked

Proposed Government legislation to transfer the cost of training to industry and abolish many of the Industrial Training Boards, has come under severe attack from the Association of Principals of Colleges.

The APC argues that the Employment and Training Bill currently in front of the House, with its return to voluntarism, will prevent the development of a coherent national strategy for education and training.

"It is another example of a piecemeal approach to education and training arising from the division of responsibilities for these matters between several Government departments. Yet if the nation is to hold its

own in an increasingly technological and competitive world, a training strategy is essential and the state as its beneficiary must contribute to the cost," the APC says.

The association points out that the 1964 Employment and Training Act was introduced because voluntary training arrangements were failing. And it stresses that in 1981 few industrial and commercial sectors have either the will or ability to implement satisfactory training arrangements such as providing vocational preparation for young people, increased opportunities for apprenticeships and training for adults.

The APC stresses that a return to voluntarism would lead to inadequate monitoring of training standards and the quantity of training.

It warns too, that the lack of statutory powers would hamper the implementation of the Government's expressed intention of extending training opportunities to the majority of young people. Under current plans this is partly dependent on the Universal Vocational Preparation scheme administered by the training boards.

In addition, the APC believes the wide representation of different sectors on the board would disappear to be replaced by a system based probably on employers association.

Special equipment grants must be retained, says the NUS

Special equipment grants must be retained to help students on expensive courses buy essential books, clothing and materials, says the National Union of Students.

A new survey by the NUS reveals that students on architecture and music courses spend more than the national element allowed in the grant for course costs. Those doing art and design and landscape also need to claim the special grants to cover their costs.

At present £150 a year is included in student grants to cover course books and equipment, while students on expensive courses can claim an extra £65. Students doing architecture spend on average at least £177 a year, and those doing music £164 a year.

"Equipment grants are essential for many students and are the only way to meet the widely varying costs of students on different courses. But it is also becoming clear all students are finding it more and more difficult now to buy books," an NUS spokesman said this week.

The Government considered withdrawing the special equipment grants during a review of student grants 18 months ago on the grounds that the notional £150 should cover all course costs. A final decision was postponed after strong representations from the NUS and other bodies.

The NUS survey was based on 36 replies from colleges and universities, detailing average costs per student for certain expensive courses. The costs covered only absolutely essential equipment, and according to the NUS, most underestimate the real costs of courses.

● *NUS survey into the cost of books, equipment, stationary and materials 1980/81, 3 Endsleigh Street, London WC1.*

● Birmingham University has stopped buying books for the next two months to make unspent funds available for next year. The library committee has been told by the university that its purchase budget will be cut by at least £100,000 next year.

'Higher priority needed' for technology skill development

A higher priority must be given to training new skills attuned to the needs of developing technologies, according to the chairman of the Manpower Services Commission for Scotland.

Miss Elizabeth Carnegie was addressing the annual conference of the Scottish Group of the British Association of Commercial and Industrial Education. People might feel that the worst recession since the 1930s was the bad time to launch ideas for radical change in training, she said. But these were ideas which had to be looked at urgently if the United Kingdom was to improve and maintain its competitive standing with other economies and exploit new technology to the full.

Many pupils left school with no formal qualifications, questioning the real life relevance of their last years there, said Miss Carnegie. The proportion going on to full-time education or vocational training was very much lower than in most comparable countries.

"Most training is given in direct response to employers' perception of needs. Perhaps understandably, employers tend to see training as a heavy on-cost rather than a long term investment. This leads to a cutback in times of recession of the kind we now see," she said.

"We have tended to treat training and education as a once-for-all experience at an early stage of life. And there have been little changes for adults to start afresh or add to what they have," Miss Carnegie said.

"Nobody can be complacent. The demands of the future of Scotland's industry and commerce, of the changing nature of work and the new patterns of work which will evolve, call for fresh thinking, willingness to change and acceptance that we are all in this together, on the same side, and each wanting to be able to play our part in the future of Scotland."

Unions step up campaign against private medicine

by David Jobbins

Opposition to the promotion of private medical schemes in the universities and polytechnics is being stepped up by campus unions.

The question has been raised with Lord Annan, vice-chancellor of London University, by senior officials representing teaching and non-teaching staff. And the new leader of the Inner London Education Authority, Mr Bryn Davis, has criticized a similar scheme at the City of London Polytechnic.

"Any encouragement of private health plans attacks the standard of provision in the National Health Service," he said. "What we want is to fight for resources to provide a decent NHS, and private health provision works against that."

Two months ago the Association of Scientific, Technical and Managerial Staffs protested to the university vice-chancellor at the facilities being granted to one medical insurance scheme, which claimed that 24 universities had replied favourably to their request to approach staff.

Following an assurance late last month that the issue had never been discussed at national level, officials in London, where at least three colleges are involved, decided to approach Lord Annan directly.

According to Mr Maurice Godfrey, a senior ASTMS official, the three colleges are the Royal Holloway, Queen Elizabeth, and Birkbeck. He said after the talks with Lord Annan that they had sought active discouragement of such schemes.

"It is incredible that with two nationalized industries like health and education under the same Government attack, one should actually try to undermine the other by encouraging private medicine," he said.

At the City Polytechnic, the 800 staff were asked if they would like British United Provident Association subscriptions deducted directly from their salary. If more than 10 did, they were entitled to a substantial discount.

The polytechnic personnel officer, Mr John Lane, said: "The polytechnic has for years enabled staff to pay a trade union subscription by authorized deductions from their salaries."

"We are neither encouraging nor discouraging the principle that staff should belong to BUPA. This has been left to the individual. We are just providing a facility if people want to use it," Mr Lane said.

After indications that it might not get off the ground because 10 people willing to use the facility had not come forward, the scheme is now to go ahead. But members of the National and Local Government Officers Association at City have been advised by their convenor, Ms Joan Twelves, not to take part.

Teachers in Further and Higher Education have had a firm anti-private medicine policy since earlier this year. Its members at City have generally been left to make up their own minds, but one of the three branches has called on the governing body not to implement the scheme.

Its chairman, Ms Connie Ostman, said: "We have an NHS which we should support, and the polytechnic should not be spending its resources on administering private medical schemes. Instead we should be showing our support for the area in which we work - Hackney and Tower Hamlets - where hospital resources are run down."

The polytechnic pointed out that the subscriptions would be deducted by the bank handling the payroll, and not by its own administrative staff.

Southampton cuts package approved

by Ngain Crequer

Proposals to close the department of theology and to restrict the growth of Russian and Italian at Southampton University have been given final approval by council.

Altogether 50 recommendations by a working party on academic goals were approved. The university will now consult trade unions and other bodies to put the proposals into effect.

Southampton was one of the first universities to discuss rationalization proposals and this report is the result.

The major recommendation is that the department of theology and the study of religion be closed with resources released to the faculty of arts and staff redeployed.

It has also been argued that no new posts be allocated in Italian or Russian. Existing courses in Russian will continue until the one member of staff leaves, after which it will be maintained solely as a service for other departments.

The future of Italian studies will be reviewed in three or four years, but until then consideration should be given to leaving staff vacancies unfilled.

Southampton may also consider improving arrangements for monitoring staff performance.

It is also going to look at the possibility of having a national scheme for a small number of senior lectureships filled by competition after open advertisement. Another proposal is to try to grant study leave to staff more frequently.

Other recommendations include improving student applications in departments which have not already done so, pursuing inquiries about sharing resources and teaching with other institutions, scrutinizing small departments, concentrating staff in specific areas within subjects, increasing in-service teacher training and upgrading continuing education.



Cambridge University has selected Sir John Butterfield, master of Downing College and Regius Professor of Physics - who lists "hacking (too much)" as one of his recreations in *Who's Who* - to become vice-chancellor in 1983.

Sir John is well experienced for the task, having been vice-chancellor of Nottingham University from 1971 to 1975. He has also been professor of medicine at Guy's Hospital Medical School.

Sir John is vice-chancellor elect. He will succeed Professor Harry Hinsley, master of St John's and professor of international relations, who will take over this October from the current vice-chancellor, Sir Peter Swinnerton-Dyer, for two years.



Professor Richard Bishop, the Kennedy Professor of mechanical engineering at University College, London, will take over as vice-chancellor of Brunel University on October 1.

Professor Bishop, aged 56, graduated with first class honours from University College in 1949 and then carried out research at Stanford University. He served a year as a senior scientific officer at the Ministry of Supply, took a doctorate at Cambridge, and returned to UC in 1957, where he has spent the last 24 years.

North American news

Canada limits foreign recruits

from Clive Cookson

WASHINGTON Claiming that Canadian universities are still giving too many faculty jobs to foreigners, the federal government has tightened up its rules for recruiting academics from abroad.

The new policy, which takes effect immediately, has angered and confused universities. They are angry because immigration minister, Lloyd Axworthy did not consult them beforehand, and because the rules will create additional problems for institutions that need to hire foreigners in fields where no qualified Canadians are available.

University administrators are confused because the immigration minister did not specify clearly enough what procedures they will now have to follow.

"The new policy simply states that universities are required to advertise for Canadian candidates and evaluate their suitability before seeking foreign academics for university positions in Canada," said Mr Axworthy's spokesman, Denis Racine.

At first some universities thought that meant that they would have to confine their first round of advertising to Canadian publications or specify that only Canadians or "landed immigrants" (foreigners permanently resident in the country) could apply. Then, if none of those applicants was suitable, they could go through a second stage, advertising abroad for foreigners.

However, the minister's executive assistant, David Zipkin, said universities had "quite a wrong impression of what we're trying to accomplish," and made the regulations seem more rigid than they really are. Ideally, he said,

the government would indeed like a two-stage advertising process, with the first stage restricted to Canadian applicants. But the ministry realized that in practice, because of the long advertising deadlines of many academic journals, then a single round of advertisements would be acceptable, so long as they specified that all Canadian applications would be considered before any for foreigners.

Mr Zipkin added that he was still negotiating details of the new procedures with representatives of the Association of Universities and Colleges of Canada (AUCC). "The intention of the policy is not to make it impossible for universities to hire competent people from abroad," he emphasized.

Apart from the row over the details of a new academic immigration policy, the government and universities have become locked in a statistical dispute over the extent to which faculty jobs have really been given to foreigners. Mr Axworthy and his staff claim that one quarter of all teaching appointments at Canadian universities over the past three or four years have gone to foreigners who are not landed immigrants. And they say that is an unacceptably high level.

But university spokesmen believe the minister's estimate is a considerable exaggeration. The most recent nationwide figures from Statistics Canada, the independent federal statistical agency, indicate that in 1978 and 1979 just under 10 per cent of newly appointed faculty members were foreigners on employment visas.

William Sayers, spokesman for the Council of Ontario Universities, insists that institutions in Ontario, Canada's largest province, have on average been

recruiting less than 10 per cent of their academics from abroad. The level of foreign hiring is apparently even lower than that in the provinces to the East (Quebec and the Atlantic Region) though it is higher in Western Canada.

The United States is Canada's main source of foreign faculty members, followed by Britain.

The immigration minister, Mr Axworthy, said he was particularly concerned about the large number of junior faculty positions that were being filled by foreigners. He said that was partly because many senior professors came from abroad themselves during the great expansion of Canadian higher education in the 1960s, and they tended to choose young academics from abroad today.

Mr Axworthy said the rules were being tightened up because some universities were not sticking to the existing "hire Canadian" policy. That has allowed universities to advertise vacancies simultaneously in Canada and abroad, but the job may be offered to a foreigner only if no qualified Canadian has applied.

Universities have occasionally clashed with the immigration ministry over specific appointments. Last autumn, for example, the University of British Columbia was ordered to give only a one-year faculty appointment to an American zoologist who was allegedly recruited over two better qualified Canadians (apparently that was done because the university thought the latter would insist on a higher salary).

Universities point out too that there are several fields, such as engineering, computer science and energy, in which they find it almost impossible to attract qualified Canadians.

Bizarre lifeline thrown to bankrupt Boston schools

John Silber, the controversial president of Boston University, has come up with another attention-grabbing idea: that his institution should be given a contract to manage Boston's bankrupt school system.

The president of the Boston School Committee, the authority responsible for America's oldest system of public elementary and secondary education, quickly turned down Dr Silber's offer and accused him of having a simplistic view of the schools' problems and an inadequate knowledge of educational laws in Massachusetts.

However, Dr Silber insisted that his offer, which he threw out at a panel discussion of Boston's educational problems last week, was meant not as a gimmick but as a perfectly serious attempt to help out the city.

Dr Silber's highly visible, combative style has brought him into conflict with the faculty of Boston University several times, and his forthright views on subjects ranging from student financial aid to academic unionization have made him one of the country's best known university presidents.

For an immensely complex variety of reasons, including appalling financial mismanagement, political feuding, and a tax-cutting initiative which the voters of Massachusetts approved in a referendum last year, Boston's schools closed down then, two months before the summer holidays were due to begin, but a state court ordered the city of Boston (a legally separate unit of local government, which is itself more or less bankrupt) to keep the schools open until term ends on June 19. By then they will have spent \$240m-\$30m

above their 1980/81 budget.

An even worse financial crunch is expected next year, when the Boston School Committee will have no more than \$30m to spend. But Dr Silber claims that he and his administration could run the system within that budget, without sacrificing educational quality, if Boston University were given a management contract for the schools.

Dr Silber points out that in 1970/71, when Boston's public schools had an enrolment of 95,000, 31 per cent more than now, the system spent \$10m or \$11,000 per pupil. This year's expenditure amounts to \$4,000 per pupil, "a ridiculous" amount to believe that one could educate primary and secondary students in Boston for less than is spent nationally on the education of young people in four-year liberal arts colleges," he said.

The main reason for the dramatic escalation in costs has been the steady growth in the number of school employees as enrolment has fallen. The payroll increased by more than 50 per cent between 1970 and 1979, Dr Silber said, and the staff began to contract only last year.

Therefore, a key element of the Boston University management strategy would be a drastic cut in staffing. Dr Silber would decide which teachers to retain solely according to their competency, disregarding their length of service - a proposal he would certainly bring him into conflict with the powerful Boston Teachers' Union.

It may be the first proposal that a private university help a school system out of a financial mess.

Overseas news

Reforms survive Dutch election

from Lionel Cohen

NIMEGEN

The major higher education reforms planned for the Netherlands are expected to survive last month's inconclusive general election, education minister Dr Arie Pais, lost his seat and the Liberal/Christian Democratic coalition no longer forms a majority.

Dr Pais' "two phase" university reform and shortened four-year undergraduate structure are therefore still expected to come into force in September 1982 in accordance with the legislation passed by both houses of parliament earlier this year.

Nevertheless, it is also anticipated that one of the first tasks of the new education minister - particularly if he is a member of the Labour or Social Democratic parties - will be to re-examine the numerical restrictions and conditions of entry which the new law puts on entry into postgraduate education. This restriction, though it has obvious attractions to a government concerned with achieving financial

economies in the soaring cost of higher education, is calculated on an average throughput of some 40 per cent of graduates, and has been the subject of widespread complaint.

In particular, both the Labour and Social Democratic parties found the restriction both unfair and undemocratic while student organizations which admitted defeat at the end of their long fight against the reform law as a whole, have publicly vowed to continue the battle against this "imposed selectivity" to the bitter end.

Before the election, Dr Pais attempted to placate this opposition by giving universities the right to make their own selection of their "second phase" students subject to overall numerical limits. Under the draft law students would also be represented on the selection committees. But neither student representatives nor the majority of university administrations were happy with this.

The Labour Party's alternative, put forward both during debates on the draft reform law and in their election

programme and widely supported by students, was for the introduction of a lottery of all the available "second phase" postgraduate research places. All qualified graduates would be eligible to enter the lottery.

Dr Pais did not favour the idea and it was clear that, democratically attractive though it might be, a lottery would create problems of its own. There are already considerable difficulties associated with the need to match the level of graduate capacity produced by the diverse first-degree courses with the more specialized needs of postgraduate research. The rigidity of a lottery procedure would be expected to exacerbate this problem unless some alternative access to such postgraduate work could be simultaneously created in parallel. This may be politically unworkable, however, judging by the related failure of Dr Pais's earlier attempt to introduce a similar "mixed" system of either lotting or examination entry for certain over-subscribed undergraduate courses.

Restore non-paying degrees, says union

from Guy Neave

PARIS

Following the installation of President Mitterand's government, pressure is growing for a major debate on the future of French higher education.

The new government is already having an effect in the university world. At a meeting in Paris last week, the major lecturers' union, the Syndicat National de l'Enseignement Supérieur, put forward a number of demands. Among them was a call for the abolition of the selective entry policy to medical studies. The demand that degree courses be abolished last summer by the then Minister for Higher Education, Mme Alice Saunier-Seïte, should be restored received particularly strong backing. No less significant was the insistence that the onslaught against subjects, regarded as "over-critical" or "not paying their way" - sociology and psychology in the main - should cease.

Though planned before the recent elections, the so-called States General for the defence of higher education, which brought together lecturers, researchers and students, is an important pointer to the change in political climate in higher education.

It also shows how future battle lines will be drawn up and some of the issues to be fought over. Crucial to any future change of direction in policy is the composition of the National Council for Higher Education and Research. A key body, it controls the validation for all national degrees. It is still, largely in

the hands of nominees appointed by the outgoing government.

Though the Socialists have promised to look into the question of elections and appointments to this body, the battle is bound to be bitter. Only last week, when the new Minister of National Education, Alain Savary, was being installed, the National Education Council, largely, it is said, under the influence of Gaullist supporters, rejected further applications for course validation.

The battle to make the National Council a university-based, rather than a government controlled body will be delicate. At the present, any move to reform its composition risks the accusation of failure to respect academic autonomy, scholarly integrity.

Nevertheless, the pressure for change is building up. Already the Syndicat National de l'Enseignement Supérieur has been in contact with President Mitterand's advisers. It has presented a number of points aimed at improving the conditions of service and other measures to restore public confidence in higher education. According to M Jacques Latrielle, ex-vice president of France's equivalent to the Committee of Vice Chancellors and Principals, the time has come to rethink the major priorities for higher education. As a first step in this direction, he has called for a national debate to thrash out the future not merely of the universities but the whole system of initial and in-service training.

Elite report causes red faces

from James Hutchinson

BONN

Should high-fliers be given special opportunities to develop their talents? This question has been raised again in West Germany by the publication of a document titled *Recommendations for the Promotion of the Particularly Gifted*, otherwise known as the "Elite Report".

It has been drawn up by the Wissenschaftsrat, the educational council, a body composed of educationalists and politicians who seek to co-ordinate the educational systems of the autonomous Länder. The topic is raised from time to time by people who question whether German mass university education would be capable of producing another Einstein and who bemoan the paucity of Germans among Nobel Prize winners.

Invariably the discussion causes some embarrassment in a country where the term *Elite* has become taboo. West Germany has its social classes of course, but the divisions are less pronounced than in most other Western countries. Everybody is at pains to emphasize that the principle of equal opportunity must not be abandoned.

Thus the educational council firmly rejects the idea of a German *École Nationale d'Administration*. Such in-

stitutions, it says, have an exceptionally high standard, but impose conditions of enrolment which are different from those of other universities. This system was incompatible with the principle that all German universities were equal.

Instead the council suggests that university teachers should seek closer contact with students so as to be able to recognize the brightest at the earliest stage. Special courses could be introduced for them - with summer schools in the long vacation - and they should be encouraged to continue their studies after graduation.

The council's report, though praised for its good intentions, has provoked a good deal of criticism. University teachers complain that overworking and overwork would make it impossible for them to give special attention to a select group of students. There was no space in the universities for special courses, and no money available.

Besides, it is argued, the training of an elite calls for elite teachers, and there were precious few of those. It is suggested that the task of catering for the brightest students must continue to fall to the scientific institutes and management training centres. The problem is that there are specially gifted people whose talents are not suited to either science or management.

Sri Lanka plans 'centres of excellence'

from D. B. Udunilaga

COLOMBO

No new universities will be established in Sri Lanka until the existing ones are fully equipped and staffed and postgraduate centres set up, according to a White Paper on Education. A National Education Council which will be set up in consultation with the University Grants Commission will decide if any new university is necessary.

Admission will be regulated according to the country's requirements of academically qualified people, resulting, it is envisaged, in reduction in enrolments for certain courses. However, an increase of intake in science and science-based courses is proposed.

It proposes that universities concentrate on first degree courses and postgraduate work, creating a favourable climate for research. They will be developed into "centres of excellence" at the apex of the educational pyramid.

The White Paper says that, with the "phenomenal" increase in the number of enrolments in the universities, came a fall in academic standards, owing to the expansion of facilities lagging behind enrolments, the "debilitating" influence of the withdrawal of English (as a medium of instruction), and the paucity of research.

"University education has ceased to be an enriching experience to the majority of students. Further, the economy finds it difficult to absorb the universities' output as the demands of the expanding sectors of the economy are mostly for middle management personnel," says the White Paper.

Commencing with one university, an attempt will be made to cut across the academic barriers between arts and science students by encouraging arts students to do a science subject for their degree.

Any reduction in the numbers at the universities (owing to the regulation of admissions according to the country's requirements) will be "more than compensated for" by an expansion of the non-university tertiary education sector.

This sector includes what the White Paper describes as professional colleges which will have a status comparable to universities and provide specialized training for "established" studies, sciences, and institutes of technical studies.

The professional colleges are envisaged as providing more "flexible" courses with a high degree of job relevance than university courses. They may be set up either in the public sector or private and come under the purview of a tertiary education commission that will be set up.

They will train professionally qualified personnel for mid-management level in government and private sectors, for the industrial and creative arts, the social welfare sector and certain technical grades.



Manolis Andronikos, Ianni Xenakis and John Braderman are among the galaxy of stars descending upon Chios

Greeks bring their gifts back home

from Mario Modiano

ATHENS

A truly impressive galaxy of modern Greek intellect has been recruited to serve on the faculty of the "Hellenic Seminars" organized by the "Ionic Centre" on the Aegean island of Chios between July 5 and August 29 this year.

They include the composers Manos Hatzidakis and Ianni Xenakis, painter Yannis Tzavounis, archaeologists Manolis Andronikos (of Virginia fame) and Yannis Sakellariakis, philosophers Gregory Vassilopoulos, and Costas Axelos from the Sorbonne, historians Eleni Glykatzi-Arweiler and Nikos Svoronos, also from the Sorbonne, John Braderman, now President of New York University, and many others of the same stature.

The intention of the "Hellenic Seminars", now running in their second year, is to "focus attention and offer high standard courses on areas of special interest to students of Greece." There are four cycles of 12 days each, which are combined with lectures, performances, and visits to places of interest in Chios.

The seminars are being organized by the Ionic Centre, a non-profit cultural organization which, according to its President Mr Isidoros Kioleoglou, "draws its name and spirit from the ancient traditions of Ionia, the birthplace of Hellenic literature, of Heraclitus, Demokritos and Pythagoras."

Mr Kioleoglou said at a recent press conference: "The Ionic Centre aspires to provide a setting and a focus for the critical philosophic and intellectual questions facing mankind today." A programme of the Ionic Centre which will be launched in the next two years will be concerned with the conditions of man in the cosmos in general, he added.

One interesting feature in this year's programme is that three leading, and often controversial, Greek film directors are to discuss their work after a showing of their films in a seminar dealing with the Greek cinema.

The programmes are open to individuals of all ages and nationalities. The fee is only 4,000 drachmas (just under £40) for one 12-day seminar, and 2,000 dr. for each additional one.

Vocational training favoured by latest government cuts

from Geoff Maslen

MELBOURNE

Australian universities and colleges have suffered a further cut in finances under spending guidelines laid down by the Commonwealth government. The government has rejected the advice of the Tertiary Education Commission to increase capital grants although it has agreed to a small increase for equipment.

Altogether universities and colleges will have their grants cut by A\$10m - not a large percentage when the government's allocation of A\$1,660m to higher education is considered.

Most of the financial burden of the reduction will be borne by the colleges which will be forced to witness the mergers of nearly a third of Australia's colleges of education, principally those concerned with teacher education. Post-secondary colleges covering technical and further education will get a 6 per cent rise in their grants bringing Commonwealth spending on this area to A\$207m. This highlights the general thrust of the government's approach to education spending which is turning more and more to an emphasis on vocational and technical training.

This attitude is particularly marked in the way the government has spelt out its guidelines to schools. Government schools have been told that next year they will have to spend 10 per cent of Commonwealth money allocated to them on the government's school to work programme. The programme was introduced by the Commonwealth in 1979 to encourage schools to spend more effort helping students, especially those likely to leave school early,

gain job skills. Unfortunately, with teenage unemployment running at up to 20 per cent all the schools are likely to do is produce a better qualified dole recipient.

The Fraser government's bias towards private schools is also revealed in the latest guidelines. For the first time in 1982, Commonwealth spending on private schools will exceed that on public schools, although public schools do receive most of their funds from state governments.

The Commonwealth has confirmed that it will provide funds for the establishment of research centres of excellence in certain universities, the Australian maritime college and a proposed national school of fisheries. The government will not support the establishment of a university of the Northern Territory, at least for the next three years.

The government has endorsed contentious proposals outlined in the report of the Tertiary Education Commission which was tabled in parliament last March. These are that universities should be recognized as having a special institutional commitment to scholarship and research and to training scholars and research workers. The government says special funds should not be provided for research in advanced education although individual members of academic staff in the colleges could be encouraged to seek "outside support for technical problem-oriented research". The advanced education sector should maintain its vocational objectives and not provide for significant enrolments in liberal studies courses, the government states.

Cancer institute chairman grilled about spending

from our North American editor

The romance between American politicians and cancer researchers, which began 10 years ago when President Nixon and Congress declared "war on cancer," may be on the rocks.

A Senate committee subjected the director of the National Cancer Institute, Vincent DeVita, to an unprecedented grilling last week about the way the NCI spends its \$1,000m annual budget.

Dr DeVita, who is well known among cancer researchers throughout the world for his work on chemotherapy, faced hostile questions from Left and Right. Republicans and Democrats on the Senate labour and human resources committee brought up many allegations of mismanagement by the institute, the largest component of the Government's huge biomedical research organization, the National Institutes of Health (NIH). And they accused Dr DeVita and his staff of being far too soft on university cancer researchers who mis-spend their NCI grants.

Only one member of the committee declined ostentatiously to join in the attack. That was Democratic Senator Edward Kennedy, who was chairman of the subcommittee on health and scientific research until the Republicans won control of the Senate last November and abolished the subcommittee. Mr Kennedy clashed several times with the new Republican chairman of the labour and human resources committee, Senator Orrin Hatch, and eventually walked out of the hearing.

Mr Kennedy claimed that there was little new in the allegations of fraud and mismanagement that the committee staff produced as ammunition for Mr Hatch. He suggested that they were being dredged up so that the new chairman could reap more publicity.

The most serious charge against the NCI was that it gave a \$910,000 research grant to a scientist who had been forced to resign from a previous university appointment after being accused of seriously falsifying data.

The scientist, Marc Straus, left Boston University after several members of his research staff claimed that he had altered results of chemotherapy experiments to make the data look better. Dr Straus, who has maintained consistently that he was the innocent

victim of a conspiracy by vindictive employees, moved to New York Medical College. A few months later, the NCI awarded him a new \$910,000 grant.

NCI officials, including Dr DeVita who was the institute's clinical director before he became full director last year, knew about the accusations against Dr Straus but did not tell the "peer review" panel of fellow scientists which approved his grant application.

Dr DeVita told the senators that he kept quiet about the alleged fraud and allowed the grant to go ahead because the charges against Dr Straus had not been proved, and the institute did not block grants just because of unproven allegations. But the Senate committee staff found that the NCI did not start its own investigation into the case until details were exposed by *The Boston Globe* last summer, months after Dr Straus's new group at New York Medical College won its \$910,000 grant. The latter was solely for laboratory experiments and did not involve clinical work with patients, Dr DeVita said, unlike Dr Straus's controversial research at Boston University.

Committee members expressed outrage at the way the institute handled the case. "I find it astounding that you're aware of these allegations and yet he still has a \$910,000 grant, made after he was in essence discharged from Boston University Hospital," Senator Hatch told Dr DeVita.

His Democratic colleague, Senator Howard Metzenbaum, attacked Dr DeVita's "idea that people are entitled to grants until they're proven guilty." That principle might apply to criminal trials but should not guide awards to research scientists.

Paul Hawkins, a newly elected Republican senator from Florida, chimed in: "You're either honest or you're dishonest." Mrs Hawkins has already taken charge of a new investigation subcommittee whose first job will be to investigate why the NCI has not been more successful in fighting cancer. "We've spent a lot of money on cancer in this country. Why isn't the cure around the corner *à la polio*?" she asked earlier this year.

Of course, Senator Hawkins's naive question is the sort that infuriates scientists even more than exaggerated stories of laboratory cheating, but it may reflect public feeling about cancer research. Researchers reply that can-



Edward Kennedy: a walk-out

cer is really a number of different diseases, and it is probably unrealistic to expect a single miracle cure to them. They point out that since 1971, as the NCI's annual budget has soared from \$230m to \$1,000m, steady though unspectacular progress has in fact been made on cancer treatment, and survival rates for most cancers have been pushed slowly up by a mixture of chemotherapy, radiotherapy and surgery.

Under fire from the senators, Dr DeVita agreed that he was wrong not to have brought the fraud allegations to the attention of the committee reviewing Dr Straus's grant application, and he said the grant should have been blocked until the accusations had been cleared up. "This would happen if a similar case arose again," Dr DeVita promised.

The politicians' clamour for the NCI to clamp down harder on fraudulent researchers is part of a more general wave of publicity about scientific falsification, and plagiarism. Most cases

have involved biomedical research rather than the physical sciences - though no one knows whether that is significant.

Another celebrated case is that of John Long, a senior researcher at the Massachusetts General Hospital (Harvard's main teaching hospital), who was awarded a \$550,000 NIH grant in 1979. He resigned in 1980 and early this year he admitted forging data for his investigation into Hodgkin's Disease.

Senior scientists do not agree whether or not there has really been a significant increase in cheating - caused perhaps by greater career pressures and more competition for research grants. Philip Handler, president of the National Academy of Sciences told a hearing on the question by another congressional committee two months ago that the incidence of fraud had been "grossly exaggerated".

... it was not for stories in the press, it would not cross the conscience of science." He added that science could handle the "remarkably infrequent" cases of dishonesty on its own without interference from politicians.

NIH director Donald Fredrickson takes much the same line, maintaining that the peer review system and the self-correcting nature of science weed out the rare frauds. "We are extremely cautious about blacklisting," he said. "If we moved carelessly and harshly, we could do more harm to the system of science than we could to an individual."

However, almost everyone agrees that the politicians' perception of scientific fraud as a serious problem may damage the current campaign by American universities to take advantage of the Reagan administration's support for deregulation. Academic lobbyists are pressing the government to relax the rules under which universities have to account for their use of federal funds. Each new case of abuse that is reported makes their job more difficult.

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Delay for tax relief on private fees

The Reagan administration has assured Congress that it fully supports tuition tax credits for parents of students attending private schools and colleges, but urged that such legislation be delayed until President Reagan's proposed budget cuts and tax reductions were approved.

Tuition tax credits "will be at the top of our agenda at the appropriate time," John E. Chapoton, assistant secretary of the treasury, told the Senate subcommittee on taxation and debt management.

Later, in an interview, Mr Chapoton expressed doubt that the president would actively push such legislation this year.

"It would be difficult to work it in this year, given the budgetary restraints," he said.

The bill now pending in the Senate Finance Committee would allow a parent - or an individual supporting himself or herself - to deduct from the amount of income taxes owed a sum of up to \$250 a year for each student enrolled in a private elementary or secondary school or in a public private college or vocational school beginning on July 31, 1982.

The tax credit would be increased to \$500 per pupil, effective from August 1, 1983. In addition, tax credits would be available for graduate students and part-time students after July 31, 1984.

The Treasury department has estimated that the bill would result in a loss of federal revenue of \$2,700m in fiscal 1983; \$5,100m in 1984; \$6,300m in fiscal 1985 and \$6,800m in fiscal 1986.

Nearly eight months ago sponsors of tuition tax credits had been optimistic that Congress would approve the legislation this year.

While still firmly committed to pushing for tuition tax credits, Senator Pat Moynihan has said that he was concerned that the president's proposed sharp reductions in aid to elementary and secondary schools and college student loan and grant programmes would erode congressional support.

Proposals to allow some form of tax relief for those individuals paying tuition have been offered in Congress as far back as 30 years ago.



Mrs Bessie Gerrard, a retired civil servant of 40 years experience, explains at the creative writing workshop how she has recently had a letter published in an evening paper. She attends the "Learning in Later Life" course with her husband. . . Mrs Hope Mallik, although well into her seventies, finds she has a taste for French and the language lab. . . Mr Hyman Fox, an 85-year-old ex-serviceman, makes a point during a creative writing class. His younger companion is one of a few young people who have decided to enroll for the ten week course.

Sixty-year-old Mrs Olive Clinch glanced round the polytechnic lecture room as she searched for words. "I have spent most of my life being just a Mum and not thinking my opinions matter," she said.

"I am on this course because I have always wanted to do something and the opportunity just hasn't arisen. It was partly lack of self-confidence and partly being too tired in the evenings to want to try anything new."

Mrs Clinch, who left school at 14 and has not attended a class since, is one of 35 retired people attending a unique course at North London Polytechnic.

"Learning in later life", which is being run in conjunction with Help the Aged's education department, is an experimental programme of ten weekly study days aimed at giving elderly people the chance to try out new academic subjects and skills.

The course reflects the growing concern for the specific educational needs of elderly people, who suffer from grossly inadequate schooling and need stimulus for an active and healthy old age.

Its appearance coincides with the formation of a new pressure group - the Forum on the Rights of Elderly People to Education (FREE) - which embraces the interests of charities like Help the Aged and Age Concern, as well as representatives from universities, polytechnics, local education authorities and research groups like the Centre for Policy on Ageing.

The group points out that the over-60s in Britain are the worst educated people in our population as well as in advanced western countries as a whole. When they were children, compulsory schooling was longer in Scandinavia, Germany, France, Canada, the United States, Australia and New Zealand.

Only 5 per cent of retired men (and even less women) have a degree or equivalent, compared

Liberating the over 60s

with 15 per cent in the 25 to 34 age group today. At least 80 per cent of those over 65 have no qualifications whatsoever, having left school at 14 or earlier.

Ironically, it was their taxes and rates that financed the great expansion in schools and also higher education.

Yet older people seem to give educational opportunities a wide berth. Only about one per cent of the retired are involved in classes, and most of that tiny minority are there because for them adult education is a way of life. The rest are presumably ripe for encouragement.

The "Learning in later life" course marks the fruition of five years' hard work by Mr Sidney Jones, head of the department of teaching studies at North London Polytechnic. During this time his research has demonstrated that both the physical and mental health of elderly people improves markedly as a result of taking courses in subjects ranging from art and drama to history and modern languages.

As a psychologist, his work has had particular influence on the views of the medical profession and led to a number of London hospitals setting up educational programmes in geriatric wards. It has gone a long way towards exploding the myth that people's ability to learn declines with age. Instead he has argued successfully that lack of use erodes mental ability.

Already the Elderhostel movement in the United States and the Université du Troisième Âge in France have provided examples for comparison. Elderhostel offers retired people the opportunity to spend one or more weeks on a college campus being taught by academics; the Troisième Âge plan also provides full and

part-time programmes for them in the universities.

London University's extra-mural department conducted a very successful summer school for retired people last year. But Mr Jones is wary of educational programmes geared specifically to older people unless, like his own, they are used as a confidence-booster and also gateway to the full range of adult and higher education.

Ideally, what he would like to see is a comprehensive policy in universities and polytechnics giving older people open access to lectures and seminars. This is already done at Hatfield Polytechnic and also at a handful of universities such as Lancaster. He hopes North London Polytechnic will be the next to open its doors in this way.

The students on the North London Polytechnic course, who go up to the age of 85, are divided almost equally into those who have not studied at all since leaving school and those who are regular class attenders. An 80-year-old Cambridge history graduate is rubbing shoulders with a 70-year-old shop assistant, who left school at 14 and who has persuaded her new employer to let her off on Wednesdays to attend.

Most live near the polytechnic's Kentish Town site, but some are taking advantage of the course's late starting hour to come from all over north London using their free bus passes.

Each weekly session begins with a one hour lecture and discussion delivered by a member of the polytechnic's staff. Based on the lecturer's own field of research, the subjects have ranged from realism in the cinema to ancient coins and medals.

This is followed by modern history, chosen

deliberately so the students can draw on their own experiences and see them in an entirely different perspective. The creative writing workshop is also very popular and the group intends to publish an anthology of poetry and prose. Before leaving in mid-afternoon, they attend either modern literature or modern language sessions.

During the lunch hour, which is spent in the canteen, they can seek advice on other courses for adults available in London. They also have the run of the library and the polytechnic's leisure and sports facilities.

The response to the programme has been enthusiastic without exception. One woman who intends to travel back on Wednesdays from her annual holiday spot on the Sussex coast explained: "I wouldn't miss any of it for the world. This has brought me into a different world and I am very grateful for it."

A number of the students said they were positively attracted by the title of the course they felt wary of attending a class with much younger people. Now they had shared this new experience with people of much the same age and background they felt confident to tackle other courses.

Mr Jones said: "I have been quite taken aback by the intensity of their responses. The elementary schooling system up to the age of 16 before the war must have been a pretty bad experience for the bulk of the population. It had inoculated them against the idea that education had anything for them or could event be enjoyable or interesting."

"Yet every week one gets this overwhelming impression that for most people this is a marvelous and total experience. Right from the word go they have asked: 'What can we do next?'"

Charlotte Barry

AUT troops are primed, prepared and paid-up as battle lines are drawn

In the calm before the storm as universities wait anxiously for their grant letters, the Association of University Teachers is preparing to fight its biggest campaign.

Its legal opinion on redundancies is prepared, its coffers - with a big subscription increase - are swelling, and though recruitment is growing of its own accord, a letter has just gone out to staff at London's medical institutes, where the first dismissals are threatened, inviting more people to join.

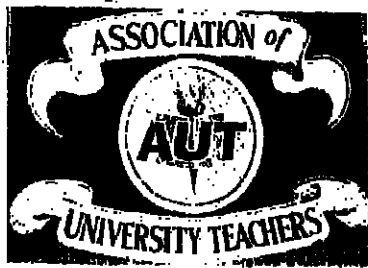
Although ultimately the success or failure of their campaign is likely to be decided by legal action or industrial strategy, the framework must be laid in Parliament.

This will be the third Parliamentary campaign the AUT has waged. The most recent was last year when the lecturers were demanding pay comparability and the first was in November 1977 when the public and Parliament first saw dons in gowns and mortar boards brandishing placards with one of the more unusual protest slogans, "rectify the anomaly".

Then 7,000 lecturers, a quarter of the union's membership, gathered for a mass lobby in what came to be the turning point of that pay campaign.

Now four years later, when the issue is not money but job security and the future of universities, the lecturers are not slow to be stirred. At their last council they passed a motion, condemning the Government's economic strategy with hardly a murmur; a motion which in previous years would have been rapidly dismissed because it was "political".

"Every political handbook says that the first thing to be done in a campaign is to write to MPs. So far letters have



gone to all Members of Parliament with any kind of university affiliation. Rather as though they were setting an examination the AUT is asking 'whether you support the Government's reduction in university income and, if so, what reasons and evidence you can produce for such support.'

Many of the 200 or so replies that have been received have included promises to take up points with ministers. In fact the Department of Education and Science has been so besieged by inquiries from MPs that they have issued a stencilled briefing setting out the reasons for Government policy.

He goes on: "A future Labour Government is likely to inherit a country which is bankrupt, whose industrial base has been destroyed, and whose income from North Sea oil will have reached a peak and be on the downward path. I believe, therefore, that it will be foolhardy and irresponsible for any one to suggest that a future Labour Government can, within a short space of time, change the consequences of present Government policy."

Mr Fred Mulley (Labour, Park), a former education minister, first declares his interest - his daughter is an AUT member - and then says he would be extremely disappointed if a Labour Government did not reverse the trend.

"An individual MP is unable to give assurances on behalf of a future Government, particularly when we are not even sure that we shall be re-elected to be Members of the next Parliament."

Mr John Watson (Conservative,

their support are Dr Mark Hughes (Durham), a former lecturer; Mr Alex Lyon (York) and Mr Denis Healey (Leeds East). Mr James Callaghan (Cardiff, South East), the former prime minister, says the best help would be a change of Government.

This is not necessarily true. In a number of cases Labour MPs have carefully avoided promising away the future: some, understandably, because they may not be in positions of influence if the Labour Party forms the next Government. But others are mindful of the other demands that will be made upon them if the time comes.

Mr William Whitlock (Labour, Nottingham North) says he does not support the reduction in university income and describes the Government as "behaving like a farmer who eats his seed corn."

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The official Labour position, as summarized by Mr Neil Kinnock (Labour, Bedwellty), is opposition to "full cost" fees for overseas students; to the changed system of union financing; and to the continual reductions in resources in every area of higher education.

He also wants the universities to build better relations with, and provide a better service for, the wider community and he is "trying to encourage discussions between all the areas of interest in education after 16 to see what system will best provide for the educational needs of the whole population."

Of course, not all MPs are rushing to show their concern for the universities. Mr Kenneth Clarke (Conservative, Rushcliffe) says that it is not possible to exempt any area of public spending from the need to achieve some economies, and it is hardly surprising that support for universities is under review.

According to him, "the level of demand for university services has dropped to some extent in recent years."

Mr Matthew Parris (Conservative, Derbyshire West) says that cuts have to be made "and it is for you (the AUT) to explain why universities should be sacrosanct when primary and secondary education as well as many social security benefits are not."

Mr Peter Rost (Conservative, Derbyshire South East) has thought long and hard about the problem. The problems of the decrease in the birth rate must be faced and the most important thing is to preserve the range of options.

Mr Barry Porter (Conservative, Bellingham and Ellesmere Port) cannot see how education can escape its share of the cuts, "nevertheless, I have reservations in view of the evidence that is being provided by the universities and I have made my reservations clear to the minister."

Mr John Watson (Conservative,

Skipton) says he shares the concern that the north west universities could be unable to supply industry and commerce with necessary skills but he is less convinced by arguments concerning staff reductions and reds

dances. Mr Fred Silvester (Conservative, Wiltlington) also raises the question of the "inflexibility" imported into the system by tenure. "There are certainly some people in the universities as well as some commentators who believe that the present difficulties could give rise to a healthier and better structured university system."

The replies show that some of the arguments are getting through, though doubtless rationality will always come second to political determination to achieve thorough economies. Nevertheless it was a Cabinet decision not to close down any university and many Conservatives are unhappy that the Government is responsible for what will be the strongest ever intervention in the running of the universities.

This week the AUT will begin the second phase of its campaign which will include a mass writing campaign by lecturers, which if nothing else should mean saturation coverage. They will argue the specific points raised by MPs and if their points are not met, will write again and again.

There will also be regional meetings with MPs and with members of the House of Lords and in London this will be timed to coincide with discussions on the Swinerton-Dyer proposition. The AUT is also going to approach members of the European Parliament and try to get a debate, particularly on the question of overseas students.

The highlight of the campaign will be a mass lobby and then the emphasis will turn, depending on the detail of the letters and subsequent events, to the courts and the campuses.

Ngalo Creque

The cost of keeping the past for the future

While London University colleges were reeling last week from the shock of proposed Government cuts, another national institution, the British Museum, was planning its strategy to offset the worst effects of its insufficient budget.

The BM has for the past two years avoided making major reductions, mainly through good management. But it now proposes to step up its campaign to raise funds from the private sector simply in order to be able to continue its renovation programme to bring the museum into the 20th century, as well as to ensure that its galleries and collections continue to be seen by both scholars and the public.

Indeed, it is vital for the museum to raise extra financial support so that its programme of improvements and displays of collections are not affected by long delays. The BM's grant is actually higher than any of the other museums. For 1981-82 it received £11m compared to last year's £10m, which of course in real terms is not an increase. Over £9m of this allocation goes towards general running costs and £1.6m towards acquisitions. This sum is only surpassed by the Tate Gallery. In addition there is a maintenance grant from the Department of the Environment.

Any minor or major increase in this budget or any of the other museums is unlikely as the Government appears to have adopted a policy of encouraging private patronage of the arts.

Earlier this year, Mr Paul Channon, Minister for the Arts, said that he would continue to encourage private sponsorship of the arts. He stressed that there were mutual benefits and that companies should realise that "art events" provided good publicity for them.

The BM, which has taken this on board, is surprisingly not planning any nationwide appeal to raise the £3m needed to renovate the upper galleries.

Dr David Wilson, former professor of medieval archaeology at University College and now director of the BM, says that a wide appeal would not serve their purpose as the money is needed in small sums of £150,000 - because the galleries take three to four years to complete. But some suspect that the real reason is to avoid embarrassing the Government by publicizing the museum's lack of funds.

The museum's strategy is basically to identify people with business interests in the areas they display, or foundations and individuals who are keen to fund museums because of their interests in the arts. At the moment they are seeking people interested in the post Renaissance as the collection is currently situated in a corridor and they wish to open it up.

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Patricia Santinelli describes the British Museum's determined efforts to raise the money essential for its programme of improvements

"Basically we operate through the old boy network, then there is the British Museum Society, the trustees and an appeals committee. It works, but nevertheless it is a heavy and long task," Dr Wilson says.

Not so success assured. Recently a major shipping group declined to fund any of the collections, in spite of their known support for the arts.

Yet Dr Wilson points out that they are not particular about what kind of company wishes to fund them and they are quite prepared to name the gallery after them. He discreetly refuses to name any previous donors on the grounds that it might highlight one contribution above another.

But visitors to the BM may well be in for a shock at some future date when they discover the name of a well-known fingerings manufacturer gracing the door of a prehistoric, Roman, Egyptian or other gallery.

What is important is that the BM should fulfil its role in stimulating people to think about the past. I want them to look at something and realize it could not be seen elsewhere and that this is both exciting and a privilege as it represents part of our history," Dr Wilson says.

Both the BM's success in raising funds so far and its ability to stimulate will be in evidence when the Egyptian Sculpture Gallery opens in September. Although the gallery is still in the final stages of construction, it is already excitingly different. For example, the famous Pharaoh tombs are now positioned in the dark with light subtly shining through an aperture recalling the atmosphere that must have existed when they were first discovered.

The gallery's opening will mark the completion of renovation of all the major lower galleries which began after the Second World War. It will also be a monument to joint Government and private funding. The price tag was £600,000 and the work took three to five years to complete.

In addition, through a generous donation from the Wolfson Foundation, the BM was able last month to open the first part of galleries showing the development of classical sculpture. The recently opened Wolfson Gallery contains Greek and Latin inscriptions which record gifts, treaties and regulations, including a major central piece of the dedication by Alexander the Great of the Temple of Athena.

Dr Wilson hopes that this will be more than a study room and will interest a wide variety of people, especially as it is unique in showing the development of the classical world.

In about 18 months visitors will also have access to the Towneley Galleries which will contain rarely seen Roman as well as Greek sculptures such as that of the Temple of Artemis at Ephesus.

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King Ramesses II (c. 1504-1450BC), one of the Egyptian antiquities at the British Museum

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cause of its important contribution to scholarship.

He stresses that the service to scholars which come in thousands every year is not as yet threatened. It remains the first priority of the museum and continues to be the first job academics after the upkeep of the collection. However, the BM's own contribution to scholarship has already been affected mainly through restricted travelling expenses.

Dr Wilson points out that he is not worried about his acquisition budget either. So far they have never run out of funds and if they do there is always the National Heritage Fund. Recently the BM purchased a Michelangelo drawing, a 17th century gold cup and a treasure trove from Pentney, Norfolk.

What is definitely of great concern, says Dr Wilson, is the state of the building, especially the upper galleries. Here floors need to be reinforced, and although some Government money was forthcoming, it was not sufficient to complete the work. Two floors which represent a fire hazard remain to be done at a cost of £500,000. Moreover, there are 11 acres of roof which need to be kept watertight, and the installation of central heating which is nonexistent in some galleries.

Renovation work has only just begun. It will take 10 years and cost, at a conservative estimate, £2m. The first part in need of refurbishing is the medieval gallery but the European and classical sections are also in need.

At the moment a part of the latter is on exhibition. The *Images of Augustus* traces the development of the Emperor's public image from the beginning of his career in 48BC, as heir to Julius Caesar, to images of Augustus made after his death when he is likened to a god.

This use of special exhibitions is the only way the BM can currently hope to show all its collections. It does this in cycles and focuses on particular aspects and details of an area.

Dr Wilson says he is also particularly keen to put more pottery on exhibition so that a coherent story of the classical world can be told. There is too a great need to refurbish the series of galleries of Egyptian art which are very old fashioned but which attract a great number of scholars and tourists.

In addition work is needed on the Western Asiatic room, the British and European collections, the prehistoric and Romano-British and early Byzantine collections. The 19th and 20th century collections are currently up but in a very temporary fashion. They are due to open fully later this year when work on the galleries has been completed.

Apart from refurbishing the galleries, the BM is also awaiting the departure of the British Library's reference division to its new building in Euston. It plans to use the space to bring back the Museum of Mankind which is currently cramped in Burlington Gardens and needs twice the space it occupies. The medieval and prehistoric Romano-British departments are also due for expansion, as many of their collections cannot be shown.

Charles Townley acquired the collection which is largely derived from excavations in Rome and its neighbourhood in the closing decades of the 18th century. A trustee of the BM, he promised to bequeath the works, but after his death in 1804 it had to be purchased for £20,000. Now recognition which was awarded to Elgin is finally to come to Towneley.

Dr Wilson is quite philosophical if not energetic about fund raising. But he does believe too that the Government ought to invest more heavily in museums and in particular the BM, not only because it is a major attraction for three million tourists a year but be-

cause of its important contribution to scholarship.

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Events

CONTINUING EXHIBITIONS

Until June 14. Hayward Gallery, South Bank, London. Raymond Moore. Photographs.

Until June 21. The Whitechapel Gallery, East London. Paintings by Brice Marden.

Until June 12. The Holt Street Gallery, Birmingham. Photographs by John Hodgson.

Until June 14. The Mappin Art Gallery, Sheffield. *The British Worker: Photographs of Working Class Life in Britain from 1839 to 1939*.

Until June 20. The Arncliffe Gallery, Bristol. *Liberty and Tecton: Architecture and Social Comment*.

Until June 26. ILEA Centre for Learning Resources, Kennington, London. Modern Art From Mozambique.

Until June 28. Yorkshire Sculpture Park, Leeds. *Archibald: A Portrait of a Formalist*.

Until June 28. Ashmolean Museum, Oxford. David Hockney: *Stage designs for The Rake's Progress and The Magic Flute*.

Until June 28. Scottish National Gallery of Modern Art, Glasgow. *Who Chicago?* Contemporary American art.

Until July 11. The Leffers Gallery, London. 19th and 20th Century works of art.

Until July 19. Museum of Modern Art, Oxford. Leon Kossoff. Paintings 1970-80.

Until October 4. Victoria and Albert Museum, Old and Modern Masters of Photography.

Until July 10. Dixon Gallery, University of London Institute of Education. Heather Brown. Paintings, drawings and prints.

Until July 3. Middleton Hall, Hull University. The University Art Collection.

EVENTS

June 29. Victorian evening of songs and ballads at Essex University Great Hall, 7.30 p.m. Tickets from £1 to £3.

June 27. College of Adult Education, Cavendish Street, Manchester. *The Women in Shakespeare*. Presented by Natalie Anglessey, Ruby Gold and Chris Shepherd. 10.30 a.m. to 3.30 p.m. £2.00.

June 12. Anson Hall, Chichester Road, London NW2. Poetry and Music from the Caribbean, 7.30 p.m. £1.

June 14. Trent Park Music Centre. *Middlesex Polytechnic. Play in, a non-competitive festival for young instrumentalists*, 3 p.m.

June 20. Trent Park Music Centre. Music by Beethoven, Debussy and Bach, 8 p.m. £1.

June 27. Great Hall, Goldsmiths College, London. Special concert by Goldsmiths' Youth Orchestra to mark the retirement of its founder and conductor, Leonard Davis.

June 15. Middleton Hall, Hull University, 1.10 p.m. *Midsummer Music*. Mozart and Beethoven.

June 17. Middleton Hall, Hull University. *Midsummer Music*. The Allegretto String Quartet plays music by Schubert and Bartok.

June 18. Middleton Hall, Hull University, 1.10 p.m. Ann Airtion and Brian Newbold (piano duo) play music by Schubert, Satie and Ravel.

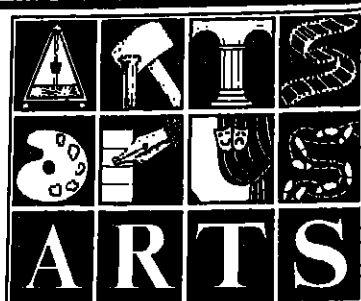
June 18. The City Lit Centre for Adult Studies, Drury Lane, London. 7.30 p.m. Improvised mime production by deaf students from North London College.

Until June 20, at various venues. Edward Kamau Brathwaite, Caribbean poet, gives readings. (June 12, St. Matthews Meeting Place, Brixton Hill, 7.30; June 16, ICA, Nash House, 7.30; June 17, Phoenix Theatre, Leicester, 8 p.m.; June 19, Trident Hall Theatre, Park Row, Greenwich, 8 p.m.)

July 11. Goldsmiths College, London. Percy Corben memorial concert. Music by Gibbons and Byrd. Purcell, Schütz, Bach, S. S. Wesley and Vaughan Williams, 7.30. £1.

Until July 12. At various venues. *Blowny International Festival*. St James's Church, Piccadilly on June 10, 17 & 24. July 1 and 8. Celebration of Accord. *The Triumph of Racial Harmony*. Further events on July 9, 10, 11 and 12. Ring 828-9980 for details.

Pieter van der Merwe on the exhibition, *The Panoramic Image* at the John Hansard Gallery, Southampton University.



A broad picture of the broad picture

Given the current swing of financial axes in higher education elsewhere, it is a surprise and pleasure to see the opening of a new university art gallery. The modest but spacious John Hansard Gallery, set in the University of Southampton's pleasant gardens, will be all the more welcome if its later offerings match that with which it has opened its career.

The *Panoramic Image* is a subject which has fuelled various research theses in the last 20 years, particularly where it relates to the history of 18th and 19th century stage scenery and pre-cinema pictorial entertainments. Little however - with the notable exception of Richard Altick's *Shows of London* (1978) - has reached the public domain either in printed or exhibition form. The Southampton show is not only in touch with this general theatrical area but extends the theme more widely into the motives, formats and media of panoptic art and the historical periods in which the "wide-screen" image has worked its curious spell over artists and spectators alike.

Durer's woodblock *Siege of a Fortress* (1527), the earliest item, immediately sets the key of detached, narrative observation, which is a central feature of panoptic art. Looking on a hill, the artist spies out the distant slaughter below; from outside the frame the viewer spies on both. The latest inclusions, dating up to last year, are photographic or photographically derived images, which by fragmentation or distortion of panoramic space bring elements of time and movement into the flat plane. Eric Renner's pin-hole camera *Ice House, Tiel, Mexico* (1969) and Richard Ross's gum bichrome prints are among many striking examples. The techniques themselves sometimes invite humour such as the multiple self-portraits of Oscar Bailey's *Backyard Event No 2* (1975).

In the middle ground (historically speaking) the variety is impressively

eclectic. Wenceslaus Hollar's meticulous watercolours of Tangier; original sketches for a Paris panorama by Henry Barker - whose father invented the true 360° "Panorama" in 1787 and brought the word itself into the language; the architect's drawings for the long-vanished "Colosseum" panorama building in Regent's Park; touristic travelogue panoramas, toy panoramas, broadsheets, playbills and "guidebooks" for panoramas. There is a superb but deteriorating six-foot drawing of Old Cairo (1839) by David Roberts, one of the masters of the theatrical branch of the art, but unfortunately little on the moving images or "cinema" of the 19th century. Moving into the age of the camera, it is however appropriate that Daguerre's own transition from scene painter to pioneer photographer should be represented by an 1844 Daguerrotype panorama of Paris, while the later 19th Century enthusiasm for panoptic photography is copiously demonstrated.

Some of this is rather repetitious and not helped by awkward labelling. Nonetheless, much of it shows the ability of a form which ostensibly relies on breadth to bring out telling topographic, atmospheric and social detail. San Francisco burning after the 1906 earthquake and related views, supply large subjects.

Is the panoramic image, as Dr Sweetman suggests, a form which succeeds by diffusion rather than concentration? After seeing this show I am not sure whether its fascination does not rather lie in a paradox - the appearance of diffusion but in fact compressing the elusive peripheries of vision into a clear and concentrated span. At any rate, this question is only one of many raised by this stimulating and original exhibition.

Dr van der Merwe is the author of a study on *Clarkson Stanfield, the Victorian stage designer and marine artist*.

Lancaster conference for the arts

It must be satisfying for Lord Redcliffe Maud to see some notice being taken of his enlightened report in 1976, *Support for the Arts in England and Wales*. The thrust of this was that those responsible for arts support and for education must collaborate closely at both national and local level.

Now the Arts Council, the DES and the Crafts Council are themselves collaborating on a course for artists, administrators and adult educators. It is to be held at St. Martin's College, Lancaster between July 20 and 24.

The initiative for the course follows the considerable work done since the publication of the report to encourage links between the subsidised arts and adult education sectors. At Lancaster, says the Arts Council, an attempt will be made to consolidate what has already been learnt, and to consider more fully the working methods and educational processes that should be applied.

There are still two weeks to run for the exhibition of modern art from Mozambique at the ILEA Centre for Learning Resources in Kennington Lane, South East London.

Perhaps the value of the exhibition is best explained by the eminent historian and writer on Africa, Basil Davidson: "The end of foreign rule was marked

by a huge release of self-expression; and the transition to independence - the joys and the sorrows - is charted in the work of the Mozambican artists. They show conclusively, not what Europeans think we think, but what we think ourselves."

Certainly the principle motifs running through the work on view are the long-standing sense of oppression under Portuguese rule, and the growing sense of self-determination since independence.

The collection is on loan from the National Museum in Maputo.

No Access is the title of an exhibition of photographs by disabled people at CameraWork, 121 Roman Road, London E2. It opens on June 17 and will continue until July 18. Wednesdays to Fridays 12.00 to 6.00pm; Saturdays, 12.00 to 4.00. Financial aid has been given by the Arts Council and the boroughs of Southwark and Tower Hamlets. Further details: 980 8798.

The work of one of Canada's foremost contemporary sculptors can be seen at Breton Hall College, near Wakefield. "My works," he says, "are of large scale and intended for public areas." For years he has been using metal plates electrochemically assembled and welded, and he always calls upon the expertise of specialist technicians.

Archibald was born in Montreal in 1915 and first exhibited in England in 1951 at the Festival of Britain. In 1951 and first exhibited in England in 1951 at the Festival of Britain. In 1951 and first exhibited in England in 1951 at the Festival of Britain.

Looking back - in anger and affection

Lynne Truss on the two National Student Drama Festival productions brought from Hull for a single showing at the Mayfair Theatre, London last month.

The two prize-winning NSDF productions provided between them an evocative portrait of the 19th century. A 25-minute excursion into how interesting it was to be a great tragic actress in the 18th Century. Kennedy's *Children* by Robert Patrick, is an almost interminable five-handed mean about how bloody awful it was to outlive the 19th.

The Siddons monologue, given by Rebecca Harbord, is addressed to Guinevere, the opening and closing image being a reconstruction of her famous portrait of her. Limited by its length, the play tends to rush its subject, attempting in the same breath to both describe the lady's popular reputation and also to refute it, making lines like "I am not so cold a statue as they say" serve the purpose of both aims. This is a little bewildering, but if little concrete fact emerges one is given a very strong impression of a personality and of an acting ability. Samples of which - the dying Belvidera in *Olway's Venice Preserved*, and the sleepwalking Lady Macbeth - were excellently realized by Miss Harbord, whose appropriately virtuosic performance was particularly remarkable for not making the customary confusion between an "actor" and his roles.

Avariciousness was one of the less attractive features of Mrs Siddons' reputation. To prove that she could sometimes be generous this play has her describe a benefit performance she once gave for a retired actor, on the occasion of which she was obliged to perform alongside a cast not one of whom she had ever seen before encountering on stage. Kennedy's *Children* is one of the few plays (and this is not, I think, to its credit) in which an actor played in such a position would suffer little or no discomfort, since not one of the cast is mentioned, consisting mainly in not blocking each other from view.

For those who don't know the play, "the 19th is just the message of the 1960s". Five people, each alone in a bar (not necessarily the same one) describe the ideals that inspired their lives in the sixties: JFK, drug-culture, avant-garde theatre, glamour. They now feel sorry for themselves not

because their ideals have proved to be empty, but because they see the world having grown too corrupt to accept them. They see themselves as creatures helpless to leave their environment, while it's being slowly poisoned by settling grime and mud. "Look what they've done to my complaint," is scarcely original in the context of American drama, but Miller, for one, dealt with the kind of problem in his 1961 comedy *The Misfits*. "I'm doing the same ever did. It's just that they... changed it around... something down the line it gets changed into something bad." The difference that Miller, being a dramatist, has his characters to interrupt each other and he makes them analyse to self-pity.

Apart from providing an opportunity to do an American accent, Kennedy's *Children* would seem to be little to actors, who have to get themselves firmly into character and do nothing but complain about it. But play is often chosen by amateur actors perhaps because, paradoxically, the actors feel justified in playing the characters for all they've got. It was certainly the impression given by the Westfield production, the most convincing of the three. Kennedy's *Children* was so convincingly pathetic that I found myself worrying about how would get home after the show. Most unsympathetic characteristically Roma whose catalogue of gaucherie and drug-induced weariness, but Elaine Aspin Roberts managed to make it work. It had been genuinely important though unfortunately she thereby the predominantly female sex-goddess (Curla) which was only by the good comic timing of Lemaitre's avant-garde Spang. Ca thought, might have looked a bit more vulnerable, as if he were used to being pushed around perhaps her individuality was perhaps to provide a greater contrast to the most vulnerable of them all the Vietnam GI who in the worst of the play is steadily crushed by his inability to make sense of his world.

Dramatic monologue is always in its way, but it is not the only one the most convincing way of acting ability. Both productions of the impression of being acting less, leaving one aching to see the real drama.

Attempt at a Formal Renewal of Some Mystic Symbols, continues until June 28.

One of the historian's most frequently chosen periods for special study, the mid-17th Century, is now the subject of an Open University arts course which students may take on its own for the first time next year without committing themselves to a degree.

Seventeenth Century England: A Changing Culture 1618-1689 examines the transformation which was taking place in society at that time, focusing on the civil war. The concept of change in every sphere of life is the unifying factor of the course; literature, architecture, music and science are studied, as well as the turbulent politics of the period.

Altogether 13 arts courses, lasting 10 months and starting in February 1982, are available singly, on a "first come, first served" basis. As with the OU's other courses, students study at home in their own time from specially written texts supplemented by broadcasts.

The other 12 courses are: *Art in Italy 1480-1580*; *Elements of Music*; *English Urban History 1500-1780*; *The Enlightenment*; *Greece 478-336 BC*; *History of Architecture and Design*; *Man's Religious Quest*; *Modern Art from 1848 to the Present*; *Styles and Social Implications*; *Reformation Studies*; *The Rise of Modernism in Music 1890-1935*; *Twentieth Century Poetry*.

Applicants should apply to ASCO, The Open University, PO Box 76, MK7 6AN.



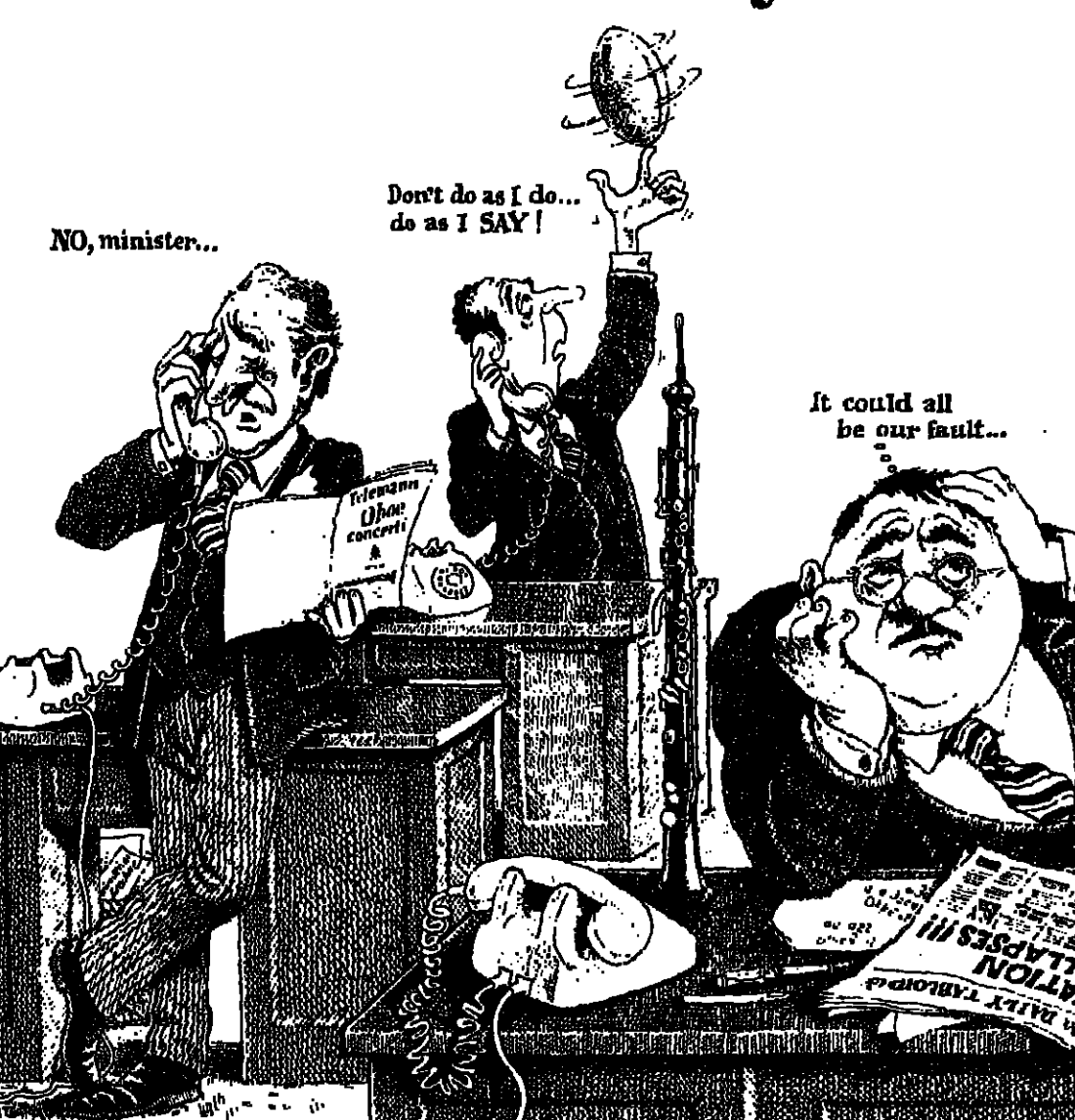
Next month sees the opening of one-man exhibition of paintings, drawings and prints by Philip Osborn at the Holworthy Gallery in New Kings Road, London. He is currently lecturer at Wimbledon School of Art and has taught at, among other institutions, Maidstone, Hertford and Hertford Colleges of Art. Above is a detail from one of Osborn's most recent works, *Standing Figure*.

The British disease seems to offer one clear symptom for diagnosis. The Civil Service needs to be reformed. There is a wider consensus on this proposition than on any other aspect of what might be labelled the British disease. Over the past 20 years pressure for change has mounted both outside and inside the Civil Service. Externally, two major enquiries into the performance of the Fulton Report in the 1960s was followed by the report of the general sub-committee of the expenditure committee in the 1970s - better known as the "English" Report from the name of the chairman of the committee. There have been major internal reviews of staffing policy, both as a result of the Fulton Report and then later in the 1970s in the Review of the Administrative Trainee scheme. Discontent among the so-called "professional" classes has provoked internal reviews within the Civil Service.

The politicians have demonstrated their dissatisfaction with the existing Civil Service order. The Labour Government between 1964 and 1970 brought in with it a number of sympathetic left-wing economists. Some account of that episode, and of much else about the mismanagement of nationalized industries, can be found in Christopher Foster's *Politics, Finance and Role of Economics*, one of the best and, alas, least used books about modern British government. The Health administration, in its turn, arrived in power in 1970 with a business team to ginger up the Civil Service. The Central Policy Review Staff (the "Think Tank") was established as a further stimulus both to change and to ministerial control of the Civil Service. A whole new system of review, PAR (the Programme Analysis and Review system), was introduced to force the Civil Service to plan its activities more rationally. When Labour returned to power in 1974, the lessons of the 1960s gave rise to new experiments in reinforcing ministerial control of the Civil Service. Ministers were encouraged to attach to themselves special advisers brought in from outside the Civil Service. These fell into two categories: one, senior figures, typically academics with specialist knowledge in particular areas, such as Professor Abel-Smith at DHSS and two, more junior, more political figures such as Jack Straw, also at the DHSS. Only with the return to power of the Conservatives in 1979, have expedients for adapting the operations of the Civil Service ceased to be a hallmark of a new government. Instead, Mrs Thatcher has concentrated her dissatisfaction with the Civil Service into the task of trying rigorously to cut it back in size and activity. The fashion has veered against large departments. Energy had been subtracted from the DTI in the dying days of the Heath administration; the DTI had been thoroughly broken up on the return of Labour in 1974. Transport was re-created out of the Department of the Environment when Callaghan succeeded Wilson as Prime Minister. These were, in part, political decisions; but the political decisions mirrored an increasing dissatisfaction among officials about the unwieldy size and operation of the new large departments.

A third sign of the bureaucrats' own worries has been the reinforcement over the last 20 years of machinery for policy co-ordination at the centre of government. This reinforcement has now reached such a size where officials seriously question whether the machinery for policy co-ordination has not been enhanced to the point where it makes policy co-ordination either undesirable or impossible. Until around 1960, policy co-ordination was done through a small Cabinet Secretariat and through the Treasury. Since then, the Cabinet Office has grown enormously in size with the development of statistical services and the addition of the Central Policy Review Staff. In 1968, the old Establishment's side of the Treasury was taken out to form the nucleus of the Civil Service Department. That nucleus has almost tripled in size over the last decade. There are three main criticisms current among officials about the present state of the government's central machinery. First, there are now three fairly separate co-ordinating bits of machinery: the Cabinet Office, the Treasury and the Civil Service Department. Who shall co-ordinate the co-ordinators? Second, how can governments expect to co-ordinate policy and to control limited areas. Throw in road engineers

When in doubt blame the bureaucracy



In our continuing series on "The British Disease," David Shapiro examines one of the patient's vital organs, the Civil Service



the responsibility of the Treasury and all aspects of staffing and personnel are the responsibility of the Civil Service Department? Third, given the diversity of ministerial responsibility for these functions, how can the Cabinet be expected to take the co-ordination of policy and its consequences seriously? There are two Cabinet Ministers responsible for the Treasury, a further Cabinet Minister somewhat shadowily responsible for the Civil Service Department, and the Cabinet Secretariat answerable nominally in part to the Cabinet as a whole but, in practice, to the Prime Minister. It was this that led Sir Derek Rayner recently to recommend to the Prime Minister that the Civil Service Department should be amalgamated with the Treasury. Officials in the two departments clearly decided for their own reasons not to welcome this proposal. They managed to persuade the Prime Minister that the study team should be set such stultifying questions that the recent report, *The Integration of HM Treasury and the Civil Service Department*, can serve as a model only of bureaucratic ob-

structionism. But since the report deals with questions that would bother no sensible Ministers in their right minds, it can be predicted that the issue will not disappear.

My argument thus far, to summarize, is that the actions of Civil Servants themselves, in the oscillation of fashion over decision-making at the heart of government, have demonstrated an acceptance of many of the points made against the British Civil Service by the politicians. This is not to say that any, or even most, Civil Servants, even those at the heart of government, would accept the case outlined above. Most, I suspect, would not. The case rests on an analysis of officials' actions, not on any survey of their declared opinions.

What then has gone wrong? Diagnosis of the British Civil Service has thrown up four hypotheses. In order of prominence in public debate, but perhaps in reverse order of real importance, the hypotheses are: first, that the upper reaches of the Civil Service are dominated by people who attended Oxbridge, read arts subjects and received their secondary education at public schools. Or, in popular terms, why staff the Treasury with oboe-playing Old Rugbeians? The second charge is that the Civil Service combines with elitism a remoteness from the realities of what it administers. On the left than can be illustrated by the question of how many senior civil servants at the Department of Education and Science have educated their children in the State secondary system? (A question, incidentally, put to me with abusive bitterness by a middle-aged Class-10 student promoted principal in the DES itself.) On the right, this charge is well exemplified by the constant feeling that the Civil Service has no appreciation of the difficulties under which small businessmen and tradesmen operate. The third hypothesis is that a major part of the problem of the Civil Service stems from its lack of responsiveness, either to the politicians supposedly in control as Ministers, or to the outside world. The failure of civil servants to respond to Ministerial instruction, is a widely but not universally, held belief among politicians. For example, both Margaret Thatcher and Tony Benn have complained in similar terms of civil servants' tendency both to argue back

and to disregard instructions where possible. Fourth, and most serious, is the hypothesis that the policy failures attributed to British Government since the Second World War can largely be laid at the door of the Civil Service. This view became fashionable around 1960 when the test of government efficacy, both political and administrative, began to be accepted as the economic growth rate. *The Treasury Under the Tories* by Samuel Brittan, was a classic text for this view. Particular attention to the alleged mismanagement of highly costly investment programmes has been paid by Professor David Henderson and by Mr Duncan Burn. Both agree in making serious charges of incompetence against the civil servants responsible for the hugely expensive investment in electricity generation. On this narrower point, at least some of the force of the criticism has been recognized by the Civil Service. The increased emphasis by the Treasury on Treasury discount rates and the emphasis on training young administrators in techniques of investment appraisal both bear witness to the acceptance of at least part of the charges made by Henderson and Burn.

All this makes a formidable indictment of the Civil Service, in particular, if it could be demonstrated that Britain's relatively slow economic growth is to be laid to the way we recruit, train and deploy our civil servants, that charge would warrant, if proven, a total reform of the existing Civil Service. For it can be demonstrated beyond doubt that the electorate above all else wants a rapid rate of economic growth and the consequences that could flow from it. But it is at this point that we hit a serious problem, not only in the political and popular diagnosis of the Civil Service, but also in the academic literature about the causes of relatively slow and fast rates of economic growth. On the one hand, the professional economists who have undertaken serious international comparisons, such as Denison at the Brookings Institution, have offered explanations of the way in which rates of economic growth differ that do not allow for much emphasis on the relative competence of national bureaucracies. On the other hand, the literature about Britain's relative decline in world affairs, and in particular on its relative economic decline, is filled, sometimes by the same economists, with cries of lamentation at the inefficient, inappropriate and misguided policies that they claim have been pursued by generations of British administrators. In defence of the British Civil Service, it could be argued that its critics should consider at least three alternative hypotheses for the relatively slow economic growth of Britain since 1945. These are, first, the disadvantages of economic forwardness (with apologies to Alexander Gershenkron, for reversing his title); second, the bias of British capital markets to the short-term and the consequent neglect of long-term investment (the main thrust of the 1970s report by the Wilson Committee on the City of London); third, the consequences of pressure to consume, a pressure represented by relative trade union power and by the impact of the electoral cycle.

Returning now to the charge that the British Civil Service is notably unresponsive both to politicians nominally in control and to the general public, we need to balance this criticism against the opposite charge. Those who believe that many of Britain's ills stem from adversarial politics must obviously argue that in practice the British Civil Service has been only too responsive to political direction. There is a fairly obvious thesis that Britain's ills stem from the swings of the political pendulum. It is not facetious to argue that the best 1960s, expansionist, Keynesian, public expenditure-minded administration was that of Macmillan and Maudling from 1962, that the most humane and effective monetarist regime, well in control of public expenditure, was that of Wilson and Jenkins between 1967 and 1970; that, again, the most energetic dash for growth in a manner dear to Labour politicians, mounted in the 1970s, was, of course, by Mr Heath after 1972; and that, finally, the best post-OPEC monetarist regime that we have had so far was that of Callaghan and Healey from 1976. On this thesis, what Britain has suffered from has been the confrontation nature of the political battle; and the Civil Service, so far from being unresponsive to the politicians, would have done better in the general public interest to try to educate incoming

continued on page 12

In search of a favourable reaction

Some 30 years ago, the idea of reviewing journals devoted exclusively to inorganic chemistry would have seemed an easy task. There were very few, and none in English. Most inorganic chemistry resided in text books. Now it is accepted (even in some French circles) that major journals devoted to inorganic chemistry are published in all the major chemical countries and in most major languages. Of course, there are other major journals, such as the *Journal of the American Chemical Society*, which publish inorganic chemistry but which can in no way be considered as inorganic journals. They are, within chemistry, multidisciplinary, and will not be considered here.

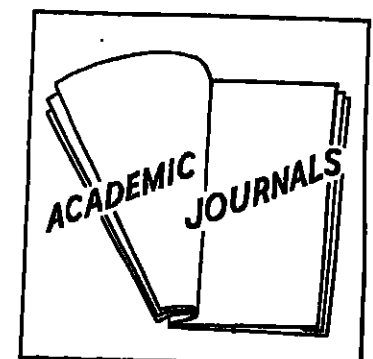
My own interest in inorganic chemistry journals arises from a close connexion with the journal of the Chemical Society, *Dalton Transactions*, which I would like to see prosper. The years since an inexorable rise in the cost of this journal (and, indeed, of all RSC journals), a loss of personal subscriptions, and an annual overall loss of subscriptions of the order of three per cent. One asks why, and what the competition has to offer. However, these questions lie outside the scope of this article. Why do publishers publish? Is there anything which distinguishes commercial journals from academic journals? Who controls a given journal's policy, and content? A simple answer to the question why the number of subscriptions is dropping is, of course, that people cannot afford journals nowadays. To some extent this may be true, and certainly the tradition amongst the older academics of buying one's own journal is no longer as alive as it was. Yet, the subscriptions to *Inorganic Chemistry* do not fall. *Inorganic Chemistry* is cheaper than *Dalton Transactions* and publishes more pages (in 1979 3674 vs. 2046) and is generally held to be better and more exciting than any other. The first new specialist inorganic journal was the *Journal of Inorganic and Nuclear Chemistry*, first published in 1955, which was received with great enthusiasm by the academic community and has steadily lost esteem and gained in cost ever since. The publishers (Pergamon) were clearly aware of a commercial opportunity which the learned societies only recognized when it was too late. Since then inorganic journals have proliferated. *Inorganic Chimica Acta*, founded by a private individual in Italy, publishes in English, and is slowly rising in esteem. It is now published by Elsevier, but its founder is still the editor. The *Journal of Co-ordination Chemistry* still appears but makes little impression in the UK.

Chemie, the publishing house of the German Chemical Society. This is the latest addition to the stable *Transition Metal Chemistry* (1975) which is published in English by Verlag, probably subsidized and is making valiant efforts to improve the standard of its contents, even paying its referees. Despite the falling circulation of *Dalton Transactions* clearly some people see commercial viability for inorganic journals.

There are also inorganic journals from the Eastern bloc. The most venerable of all, *Zeitschrift für Anorganische und Allgemeine Chemie* continues to appear from Leipzig (DDR) although the constituency of its authors covers both German states and further afield. The Russians publish at least two, *Koordinatsionnaya Khimiya* and *Zhurnal Neorganicheskoi Khimii*, both of which are published in Russian but both of which also appear in English translation. Russian inorganic chemistry (and, indeed, chemical publishing) has a tradition of its own, but it is depressing to see how much Western chemists tend to ignore the Russian literature, and vice-versa.

The most prestigious inorganic journal is probably *Inorganic Chemistry*. Currently an ACS member pays \$36 for a year's subscription (ca. 3800 pages), 80 per cent of papers submitted are accepted, there is an optional page charge, currently ca. \$30 and the time from receipt to publication is of the order of nine months. One is struck by the high proportion of papers based upon X-ray structure analysis, and perhaps the reliance on big machines, but overall what impresses is the range and vitality of United States inorganic chemistry. It has a weakness if it may be in the preparative area.

Dalton Transactions is more expensive, has fewer pages, but has no page charges. The appearance of the journal is much more old-fashioned. It has a reputation for overlong publication times which was certainly justified, but these now average about eleven months. It has a reputation also for over-punctilious editing, and it is true that traditionally CS journals have encouraged terseness of style, whereas ACS journals have been much more permissive. It should be borne in mind, however, that whereas commercial journals may actually encourage expensive styles in order to fill available pages, academic journals are much more likely to be worried about production costs. *Dalton Transactions* also has problems with unevenness of refereeing standards. This can be overcome in several ways. One is to pay referees (which I believe is undesirable), another is to dispense with



In our continuing series on academic journals Jeffrey Leigh looks at the way in which chemistry is served by its publications.

referees altogether. However, the idea that a man should be allowed to publish everything as he wishes when he wishes, and that his peers will easily be able to detect dross from gold is one which may have been valid in older, more expansive days. Today pressures of finance and volume of material make this an impossible luxury. The only solution is for referees to act faster and more conscientiously, as a service to the scientific community. Whether people can still be objective enough to do this with all the pressures upon them is certainly open to doubt.

So why do people publish? It cannot be simply to advance the science. They publish in general for reasons of self-advancement and self-aggrandisement. This is not necessarily a disparaging comment. However, it is clear to me that it does not really matter to the world of science if my next papers never appear. Sooner, probably, rather than later, someone else will do the work. So why does it really matter that one journal takes two months longer to publish than another, because matter it really does?

The reason generally given concerns priority and hence the credit for a given piece of work. In fact, the date which determines priority is the date of receipt, which has nothing to do with publication times. In practice, this is overlooked and there is always pressure for rapid publication. *Transition Metal Chemistry*, which is a beautifully produced journal with glossy paper can, on occasion, produce a printed paper within three months of receipt. Whether a paper produced so quickly can be properly refereed may be questioned, but the refereeing process should not take longer than about two weeks, and a short publication time is then simply a reflection of administrative and production efficiency. Many authors

would certainly not regard cursory refereeing as a handicap (and, I guess, relatively few welcome referees' comments as constructive criticism) but there seems no reason why other journals should not be able to achieve similar, short publication times.

Commercial publishers, particularly, are always looking for a wider constituency, and bio-inorganic chemistry is one of the growth points of inorganic chemistry. Whether it is really a discipline in its own right is a matter of opinion, but the area has now been recognised to the extent of being the subject of a Chemical Society Specialist Periodical Report. *Inorganica Chimica Acta* now has a Bioinorganic section, and the *Journal of Inorganic Biochemistry* has arisen phoenix-like with new direction from the ashes of its earlier editorial regime. It is attempting to define and encourage the whole research activity generally designated bioinorganic chemistry, but it is too early to be sure of its success.

There is no doubt that journals are coming under increasing pressure as financial resources of potential buyers become more strained. It is probable that the commercial publishers can, by and large, keep a journal functioning even at a loss for a considerable period, but it is doubtful whether learned societies can allow themselves such a luxury. Even libraries are no longer the certain source of subscriptions they once were, and personal subscriptions are very few. It is therefore time for authors to consider seriously why they publish in any given journal, and whether they are doing the right thing, specifically, should one publish in a commercial journal when a learned society is a direct competitor?

It is my belief that one should not, but this is not to deny a commercial publisher the right to find and exploit a new market. It is a great pity that the Chemical Society was too hidebound and conservative to appreciate soon enough that chemistry was expanding and that new journals and kinds of publication were necessary. Consequently a large market which could have been captured has been developed by commercial publishers, and the Chemical Society has always been struggling at the rear of the pack. The same criticism cannot be made of the American Chemical Society.

The reasons for supporting a learned society journal as opposed to a commercial journal are at least two-fold. The first is that the learned society has a vested interest in the health of the science and the quality of the publication. Ultimately a commercial publisher has to make a decision on purely financial grounds. I am not accusing publishers or the academics associated

with them of bad faith, but this must be taken into account. For example, the Chemical Society has been heavily criticized for its insistence upon the application of IUPAC nomenclature rules, and perhaps it has been less flexible than it might have been in its use. Nevertheless, it attempts to achieve the highest standards in its respect. Recently I undertook a survey on behalf of the IUPAC Commission for the Nomenclature of Inorganic Chemistry on the use of IUPAC nomenclature in journals. Only the academic journals, East and West, seemed to realise the need for logical, consistent nomenclature and attempt to apply it. The commercial journals, by and large, did not know IUPAC nomenclature and were not interested. And one can understand why. No one wants to risk discouraging authors who often regard nomenclature as an obstruction to their freedom to express themselves as they wish. Unfortunately this is wrong. Good nomenclature should be a fundamental part of a writer's craft, good grammar.

The second reason to support a learned society journal is that, at least in principle, the people who control and decide on the journal's policy are the members of the society themselves. How effectively they do this varies from case to case. The ACS journals have, as senior editors, practising scientists who have considerable authority. In contrast, the Chemical Society has a professional editorial staff and editors who are trained as chemists are no longer practising. More by default than by design, this has led to the past to a gulf between those who produce material for the journal and those who publish it. The current reorganization of the Chemical Society and the genesis of the Royal Society of Chemistry is giving us the chance to bridge this gulf through the formation of active editorial boards, and, indeed, the influence of such boards is already becoming evident in the policy of *Dalton Transactions* and in the appearance of new Notes and Letters sections. The pressure from the members of the society is having an effect.

The commercial pressures of publication and limited resources are affecting both academic and commercial journals alike. It would be a tragedy if academic journals were to suffer disproportionately through lack of resources and lack of support. It is the duty of the academic community to ensure that this does not happen.

The author is senior principal scientific officer in the Agricultural Research Council's unit of nitrogen fixation at Sussex University.

too much importance to the staffing of the Civil Service to blame our ill on that. But as a symptom of one disease to the British are the problems of the Civil Service, a choice must be made among graduates aged about 21, who have never in their life done a serious job. Put in these terms, the Civil Service Commission has no chance of satisfying its critics when it gives such a nonsensical task to perform. Relatively minor reforms of the career structure of graduates recruited into the Civil Service would enable the Civil Service to cease to make these ridiculous, self-fulfilling judgements about raw recruits aged 21, and might enable the Civil Service to start to judge people on their performance in their jobs as civil servants. Such a reform, while technically easy to do, would meet with the most ferocious opposition from the present senior ranks of the Civil Service. A very tentative move in this direction, adumbrated in the report of the Administration Training Review, was effectively aborted at birth.

Where then does the Civil Service stand in the British Disease stakes? My argument has tended to suggest that the odds are altogether too short on the British Civil Service as a major cause of our present discontents. While the present career structure of the Civil Service has parent faults, it ascribes far more to believe that tinkering with the machinery and personnel of government will solve our national problems. I have argued that whatever

All the lit. that's fit to list

Knowing best, and informing others who don't, is one of the oldest and purest of human pleasures, and as soon as the number of printed books exceeded the capacity of a four-foot shelf, folk began advising other folk on what they should on no account be without: *De libris variorum eorum usu et abusu*; *Consils pour former une bibliothèque peu nombreuse mais choisie*; *Bibliotheca selectissima*; *Nouvelle bibliothèque d'un homme de goût*. There were even travelling libraries which condensed all a gentleman's library needs into a portable chest of flashy morocco lemons: coming down market there were the *Hundred Best Books of Sir John Lubbock*, 19th-century biologist and polymath who invented everything from bank holidays to bimetalism.

So Raphael and McLeish stand in a noble tradition with *The List of Books*, a lanky breast-pocket *valde-mecum* listing at least 3,000 books in categories like "media", "medicine", "music", "mythology", and describing them in a distinctive manner: formidably (if unevenly) well-informed, judiciously judgmental, endlessly flippancy. The style of the Kerouac entry is characteristically, though the solecism is untypically blurted:

"Muddening 'bible' of the beat generation. Sturdy-eyed search for the Wide Blue Yonder was (and is) an American dream; Kerouac's sentimental attitude to sex and drugs was to see its apogee in a nadir called Manson. See BIOGRAPHY (Charters) DIARIES (Ginsberg)."

And the entry is accompanied by the tiny symbol of a magnifying-glass, signifying not that it is a detective story or that the print is small, but that it is "difficult: worth persevering". (*On the Road* difficult? The original *Easy Reader*?) Other symbols tell us that a book is "seminal", "a minor masterpiece", "a minor masterpiece", that it is "not to be missed" (what are missable books doing here anyway?), that it is illuminating or infuriating. A curious object like a small inky mosque means "a particular pleasure to read"; it may be a sunny pleasure-dome, or Jodrell Bank giving ear to the music of the spheres. *The Golden Bough* and *Mediterranean Seafood* each rate five gnomish glyphs, a row that would not disgrace a dictator's chest.

What one fears of course, as one is meant to, is that the massively erudite authors have read all those books on phenomenology and Portuguese history that one hasn't even heard of, as well as all the books that one would never admit to not having read in infancy; so one tries vengefully to think of books that one has read and they have apparently not. But this game is taboo, a game all too easy and underhand, like nipping at errors in dates (*In Our Time*, *The Father Brown Stories*), and therefore I hardly mention my stupefaction at not finding *Pilgrim's Progress* and suppress my gleeful surprise at the absence of Albert Einstein (Alfred is in), Isaac Deutscher or Norbert Wiener, to name but three. After all, if you have to accommodate *How to make a Jewish Movie*, *The Joy of Gay Sex* and *The Complete Book of Australian Wine*, then you will have ruthlessly to purge the second rate or trivial.

Raphael and McLeish also show a curious neglect of schilling, who features in another exemplary list I've looked at, the *Library for Younger Scholars*, edited from a Cambridge MS of around 1655 (St John's College K 38) by de Jordy and Fletcher for *Illinois Studies in Language and Literature*. The unknown cleric who compiled it (probably Thomas Barlow, Bishop of Lincoln, if you must know) had in mind "the younger and poorer sort of students", which makes for contemporary relevance. He's a little stronger on ecclesiastical history and patristic literature than suits today's taste, and correspondingly weak on the National Book Council; revised 1963; and now presumably superseded by its polymath author's *Guide to World Literature*. As befits an older, more belated tradition, Seymour-Smith begins with "autobiography and letters" - I suppose alphabetical order something to do with it as well. His first 10 entries are Aquinas, Jane Austen, "Barbellion", Baring, *Reliquiae Baxterianae*, Beckford, Gertrude Bell, Hilaire Belloc, Arnold Bennett and Thomas Bewick. Only the last two

*The List of Books, by Frederic Raphael and Kenneth McLeish (Mitchell Beazley, £5.95)

The author is reader in government at Brunel University



Jack Kerouac (left) earns a puzzling magnifying-glass symbol for his "maddening 'bible' of the beat generation," while James Joyce is subjected to both division and derision.

What can books on Jewish movies, gay sex and Australian wine possibly have in common? Eric Korn explains

doctrines not to be endured"; and likewise in praise: an edition of Homer together with *Eustathius His Paraphrase* is "enough of itself to make a man a Grecian"; he is even intemperate in preaching moderation:

"Let me advise you before, or with your Readings of Controversies you ever ioyne the diligent reading of Pacificatory writings, that you be not stricken with the too too common furor and rabies of Contenders, by which they teare and destroy the Church, and their owne soules & serve the Devil more than open Sinners do, and banish that truth which they are so carnally zealous for."

If Messrs Raphael and McLeish are ever carnally zealous for truth, it is in the philosophy section. "Massive; magnificent; metaphysical" is their estimate of Hegel; "arguably the most perfect, sublime metaphysical system of them all" for Spinoza. But Leibniz makes them skittish: "If you've never thought of yourself as a monad, now is your chance". This section, with a few classics, is the only area where they overlap with Bishop Barlow; and it must be said that he is the more conscientious. While the choice of a correct edition of the original text was the chief indeed sole purpose of the earliest lists, we are nowadays offered no such help: "with older authors, foreign authors and especially classics, we recommend browsing through available editions to find the best".

It is instructive to compare this latest guide through the literary undergrowth, this latest attempt to see not the wood, but the Big Trees, with an agreeable earlier version, Martin Seymour-Smith's *An English Library* (first published 1943 for the National Book Council; revised 1963; and now presumably superseded by its polymath author's *Guide to World Literature*). As befits an older, more belated tradition, Seymour-Smith begins with "autobiography and letters" - I suppose alphabetical order something to do with it as well. His first 10 entries are Aquinas, Jane Austen, "Barbellion", Baring, *Reliquiae Baxterianae*, Beckford, Gertrude Bell, Hilaire Belloc, Arnold Bennett and Thomas Bewick. Only the last two

survive in this year's selection. Seymour-Smith's guide is a relevant comparison, since it is built to the same scale (2500 entries) and is also opinionated (though not sententious). He is "not to be missed" (what are missable books doing here anyway?), that it is illuminating or infuriating. A curious object like a small inky mosque means "a particular pleasure to read"; it may be a sunny pleasure-dome, or Jodrell Bank giving ear to the music of the spheres. *The Golden Bough* and *Mediterranean Seafood* each rate five gnomish glyphs, a row that would not disgrace a dictator's chest.

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And then there is the Bowker *Reader's Guide*, whose current edition runs to three massive volumes, just the thing for the National Librarian of a medium-sized emergent country; the Pelican *Reader's Guide* of 1960, with its 20 diverse specialist contributors; and further back Hoppé for Everyman, Dibdin, Carl F. Braun . . .

Carl F. Braun? Yes, one of my favourites, though I know little about him. He's the author of *Two Hundred Good Books: a List and Reviews* (Carl F. Braun and Co, Alhambra, California, 1949), described as "on of a series of publications written by the president of C. F. Braun and Co to its employees."

Braun seems to have been a manufacturer of grommets or diodes or something which inhaled some technological hallucinogen: "It is the purpose of this booklet to aid the engineer and leader in fitting himself to be a middleman to the social sciences."

(There's a lot about training leaders.) Braun's first four entries are *Presentation for engineers and industrialists* by Carl F. Braun, *Fair Thought and Speech* by Carl F. Braun and the same author's *Letter Writing in Action and Corporate Correspondence*. His fifth entry is *A general index to four books* by Carl F. Braun; then in an outbreak of self-effacement he recommends Hayakawa, Fowler, and the King James Bible (together with *The Development of the English Bible*, a compilation with a forward by D. F. Braun.)

His philosophy section is eclectic, a trifle naive: Lowes Dickinson and Santayana, Schopenhauer and Marcus Aurelius, William James ("especially helpful to leaders"), Thomas A. Kempis and, surprisingly, Balthasar Gracian. C. S. Lewis is, properly, represented by *The Screwtape Letters* (rather than by his children's books and his SF). Sir Joshua Reynolds receives a devastating tribute: "the word, Ari, could be changed to Engineering, Construction, Manufacturing, Accounting, or almost anything else, without loss of effectiveness."

In Section VI (Sociology Anthropology Leadership) honesty compels him to begin with Carl F. Braun's *Management and Leadership* ("to arouse the industrial leader of every rank to a proper appreciation of the true dignity of his profession.") (In Raphael and McLeish's list, by contrast, Raphael and McLeish only get one entry between them. It's Raphael's.)

It is fun to have fun with Carl F. Braun, but he does get some things right. His enlarged ego still leaves room for Trotter's *Insights of the Herd in Peace and War*, Robinson's *The Mind in the Making*, Einstein and Heisenberg's *Evolution of Physics*, Sir Thomas Browne, John Bunyan and the Koran. (Bishop B. gets that too.) All worthy authors in their ways, and all authors neglected by Raphael and McLeish in their vastly knowledgeable, wickedly entertaining and profoundly pointless book.

The author is an antiquarian bookseller in London.

Braying from the gallery

Wayland Kennet describes how indiscriminate interruptions made a mockery of debate at the students' union

I recently went to a debate in the students' union of a British university, which I won't name, for fear of making life harder for those whose job it is to reform it. It could be anywhere. Nor will I say what the motion was, since it was not discussed. Enough to say there were speakers from all the main political parties. There were about 50 people on the floor of the house and 50 more standing, with mugs of beer in their hands, in a gallery right over us. They were quiet at first, but loomed rather oppressively. During the first two speeches they heckled a bit more than one actually enjoys as a speaker, but nothing out of the ordinary. One of the officers of the union told me that, despite appearances, they were in fact members of the university.

After that, the evening went through three phases. First, they jeered. They jeered speakers of all parties not, as far as I could make out for their political views - in fact it could not have been that, since they were not allowed to develop them - nor even for their political labels, though it was clear the gallery belonged to the extreme left and thought of themselves as proletarian. They jeered at the content of the invited speakers when they were either "educated", or from another part of the country, or from another part of the region; and, they mimicked them. They jeered at their sex, if they were women, and mimicked them; some of the women up there did this as well as the men. They also jeered at their own elected chairman.

During this phase a professor at the university spoke. He wriggled and smirked and tried to placate them by making fun of himself and his own teaching. Up in the gallery they liked that; they laughed with him. The name of Plato drew an extra big cheer. This phase was very painful to sit through because the weaker, and the different, were being humiliated, and because the actual noise level was painful.

The second phase was different. There was a disturbance overhead in another part of the hall, away from the gallery, where there was a big window. Four young men had lowered their trousers and were sticking their bare arses against the window and drumming on the glass with their fists like babies.

The third phase was ushered in by a student speaker who had little stature and a piping voice, but great courage. The gallery chanted that he had crossed some picket line somewhere; he tried to reply, but of course in vain. They got into a rhythmic chant of "Scab! Scab! Scab! Scab!"

The whole ritual had now lasted two hours, and the chairman tried yet harder to restore order. He was a gentle, thoughtful, fair-minded, optimistic soul: exactly the sort of person who does appeal to, and gets elected by, majorities of student bodies, and exactly the kind the tiny militant-astid minority loves to humiliate. "Will you please come down to the floor and take part in the debate according to our democratically decided standing orders? Otherwise I will have to close it."

Of course he could do nothing, and close it he did. The two ringleaders of the mob, who had the two loudest voices, did begin to seem isolated. A little space developed round them, and the blood-lust began to give way to an apathetic stillness. But as we went out the two fognhorn voices continued to bellow into an emptying hall: "We'll do what we like; we'll do what we like! Scab! Scab! Scab! Scab!"

Lord Kennet is chief whip of the Social Democratic Party in the House of Lords.

Blaming the bureaucrats

from page 11

governments about the merits of their predecessors' achievements. This defence of the Civil Service, if it is convincing, does not entirely absolve them from guilt. By every critic's account, the senior civil servants represent a body of powerful and intelligent people. If the process of adversary politics has been so damaging to the country over a twenty-year period, then it is fair to ask why the British Civil Service has shown so few signs of taking the effects of adversary politics. Could the Civil Service not have tried more energetically to educate Opposition?

The case for open government is rather different. It rests partly on a basic value judgement that in a democracy government should be as open as possible; partly on considerations of efficiency, that openness requires civil servants to prepare their arguments for ministers with greater care, with greater respect for technical considerations, and with no attempt to conceal from Ministers the range of options open to them. In formal terms the

openness of British government has greatly increased over the past 20 years. As the Estimates Committee was changed first into the Expenditure Ministers with greater care, with greater respect for technical considerations, and with no attempt to conceal from Ministers the range of options open to them. In formal terms the openness of British government has greatly increased over the past twenty years. As the Estimates Committee was changed first into the Expenditure Committee and then into the present system of 12 departmental committees, the House of Commons has developed a system that requires senior civil servants to expose the process of policy making extensively. The wider critics of secrecy in British government quite clearly have never seriously attempted to use the mass of material that exists in the Parliamentary papers of the past twenty years. In informal terms, British government has become even more open. The rise over the past twenty years of the professional specialist of serious newspapers are well informed - if they choose to read - about the processes of policy formation. This is true, as recent weeks have demonstrated, even in the allegedly sensitive area of defence planning. Now, it is one thing to criticize the traditional British Civil Services emphasis on secrecy. There are plenty of very senior officials still in post whose attitudes to open government are antediluvian. But it is not clear that the policy-making process will necessarily produce better results

for being carried out in public. Public decision making, as Tony Benn discovered, when he quite seriously attempted it at the Department of Energy, inevitably means that decision making is likely to be slowed. Open government is desirable in itself on grounds of democracy. But critics of the administrative performance of the British Civil Service have not necessarily been agreed that openness will contribute to better decision making. For example, efficiency of British government for the most part in conditions of what seemed to be ludicrous secrecy, even in the eyes of the rest of Whitehall.

I have very deliberately left little space to consider the charges of reticence, elitism and the recruitment of the "high-flyers" of the Oxbridge class subjects and the public schools. This is not because such criticisms seem to me negligible, but are not necessarily to be regarded as relevant. The trouble, rather, with these criticisms is that they have been couched in terms that do not readily lend themselves to constructing a reform of Civil Service practice. Yet this could be a relatively painless and easy task for any energetic, reforming, Cabinet Minister responsible for Civil Service management. There is no need to argue about the relative merits of graduates with relevant degrees, or to argue about what degrees might be relevant. There ought to be no need to argue about the

social and educational origins of civil servants. These arguments have arisen only because of a traditional British Civil Service insistence that, in selecting those who are to reach the highest ranks of the Civil Service, a choice must be made among graduates aged about 21, who have never in their life done a serious job. Put in these terms, the Civil Service Commission has no chance of satisfying its critics when it gives such a nonsensical task to perform. Relatively minor reforms of the career structure of graduates recruited into the Civil Service would enable the Civil Service to cease to make these ridiculous, self-fulfilling judgements about raw recruits aged 21, and might enable the Civil Service to start to judge people on their performance in their jobs as civil servants. Such a reform, while technically easy to do, would meet with the most ferocious opposition from the present senior ranks of the Civil Service. A very tentative move in this direction, adumbrated in the report of the Administration Training Review, was effectively aborted at birth.

Where then does the Civil Service stand in the British Disease stakes? My argument has tended to suggest that the odds are altogether too short on the British Civil Service as a major cause of our present discontents. While the present career structure of the Civil Service has parent faults, it ascribes far more to believe that tinkering with the machinery and personnel of government will solve our national problems. I have argued that whatever

BOOKS

Squaring the gentlemen of the press

The Rise and Fall of the Political Press in Britain, volume one: The Nineteenth Century
by Stephen Koss
Hamish Hamilton, £20.00
ISBN 0 241 10561 7

by J. R. Vincent

In the 1890s the British Museum decided to throw away its newspapers. The argument was not that they were too bulky, but that they were worthless. By a small margin, the plan fell through. Newspapers remain, however, the great unused source for modern history. This is a matter of snobbery, access, and pre-conception. Snobbery, because librarians think only *The Times* worth keeping. Access, because the British Museum Newspaper Library is a costly place for the non-Londoner. (The only way to do research is to live in London, but if you want to do research, London is too expensive to live in.) There are historians of Victorian England, myself for one, who have never glimpsed a copy of its leading paper, the *Daily Telegraph*, or "Delirium Tremens" as Disraeli called it, on account of its excitability. Preconceptions, because too many have drawn a false distinction between what the papers say, and what politicians say in private letters.

It is not easy to study the press. There are arcane studies in journalistic antiquarianism, such as "Who Conducted The First Interview?", in something called *Journalism Studies Review*. There is Aspinall's weighty *Politics and the Press* (1959) which took the story up to 1850 (Aspinall, by the way, being the last of those exemplary provincial professors who took research so seriously that they were rarely seen in the department after ten each morning). More recently, there is Alan J. Lee's *The Origins of the Popular Press, 1855-1914* (1976) which particularly covers the rise of the provincial press. So far, so good; but when one starts to look for intimate political detail, the difficulties are enormous. The paradox is that newspapers do not keep old papers. Professor Koss has dug until one can dig no more. He has even studied the minutes of the periodicals committees of the West End clubs. But out of over a hundred sources cited, only two are actually the archives of newspapers — *The Times* and the *Manchester Guardian* (the *Guardian* to Victorians meant the church weekly of that name). Even John Delane's papers do not survive as a distinctive collection, and yet Delane, editor of *The Times* from 1841, had more impact on aristocratic government than the Charists and the Anti-Corn Law League together. He was the most powerful middle-class man in England.

Stephen Koss is a young American, a professor at Columbia, the holder of many blue ribbon awards on this side of the Atlantic, a visiting Fellow of All Souls, and the immensely productive author of five books, on Haldane, John Morley, Brunner, Asquith, A. G. Gardiner, and Nonconformity: the coming of man, one might say, among Americans working on British political history, and one whom one would expect to tackle a protean topic like the press with daunting energy. My complaints against him are two. One is that he writes "of that ilk" to mean "of that kind", when it means "of that place": a solecism, perhaps acquired at All Souls, which the late Sir Denis Brogan always corrected, and which cannot therefore pass unnoticed. Otherwise, Professor Koss writes correctly, if not urbanely or without flatness, and he has — this is the problem — mastered his materials. Or perhaps his materials have mastered him. He has done too much research. He has found innumerable journalistic needles hidden in enormous political haystacks. Looking at his apparatus, I cannot begin to think how much reading has gone into it, or rather I shudder to do so.

Koss "aims to reveal, by selective illustration, the power relationships

through which party politics moulded the press and, conversely, the press affected the conduct of party politics". Much of the book consists of potted histories either of key political crises — the Crimean War, the Second Reform Act, the Eastern Question, Home Rule, the Boer War — seen from the angle of the press; or of individual newspapers and their management. The portraits of individual journalists are weak, and there is more sensitivity to the managerial problems of individual newspapers than to their ideological mix. The material on political crises is often novel, but unfocused, and needs brooking over by those eremitical souls who devote their lives to such things. My impression is that Professor Koss, magpie-like, has collected some gems which in other hands will show their full worth. This book is too episodic to sparkle, too competently energetic to overcome the difficulties of exposition it encounters, and its epistemological prolegomena bring no save grace.

That the present study undertakes to trace "the rise and fall of the political press in Britain" is self-evident from the title. But what are the connotations of each of those elements? What characteristics are ascribed to them? What are the perimeters within which they will be approached, and from what perspective? What is the justification for concentrating attention on certain factors, inevitably at the expense of others? "Rise", "fall", "political", and "press" are fairly elementary terms. Nevertheless, all readily admit to rival definitions.

The reviewer, however, even at his most carping, must not let his yawns smother a recognition of truth. For Professor Koss's message is true and quite important. The orthodoxy which he corrects is that there was a great revolution in the press about 1855, when the stamp duty came off, and 1861, when the paper duties came off. Before, the press was supposedly venal and managed; afterwards, upright, free, and (of course) the envy and the bafflement of all other nations. Foreign envoys were always denied for their failure to understand that in Britain the press did not reflect the views of the politicians. In fact, the revolution never happened — as, of course, Hilaire Belloc had memorably sustained in rhyme, and Lloyd George had confirmed when he talked of "The Press? What you can't square you squash, what you can't square you square". We have always had managed press. We have always had dirty tricks, leaks, and black propaganda. The foreign envoys were right. Professor Koss leaves little standing of the national myth of an independent press. It only remains for someone else to show that the Victorian higher civil servants fiddled their expenses, and Britannia will be finally stripped of myth.

The London daily press, a late eighteenth-century light industry, was always political. Not because its customers wanted it to be — they far preferred the more gruesome *Sundays*; but because its editors preferred it that way. The young Pitt used large sections of the press, including *The Times*, for propaganda, paying quite well in return. Cobbett, whom both E. P. Thompson and Richard Ingrams claim as their spiritual father, got £3,000 from the government for his *Porcupine*. Journalism, as Walter Scott reasonably concluded, was disgrace and degradation: "it would rather sell gin to poor people and poison them in that way". Leslie Stephen defined a journalist as a man who writes for pay on matters of which he is ignorant. There were many ways of buying journalists and if by 1850 money changed hands rather less than before, it was because it was cheaper to buy them with exclusive information.

Delane was the first journalist to visit aristocratic houses by the front door, as it were. It was not that he had new standards of morality. He



J. T. Delane, editor of *The Times* from May 1841, "the most powerful middle-class man in England".

had hardly settled in the editor's chair before he was pressing the government to promote his brother, a Customs officer. But Delane had the gift of "social diplomacy", as Disraeli put it. *The Times* was simply too powerful, and too aggressive, to indulge his taste for unattributable prose. The supposed lack of public speaking before the 1880s falls into place only when it is realized that the political air was always full of noises, for those with ears to hear. The editors might be running a mass press, but high politics was the very air they breathed. Even in Edwardian times, editors like Gardiner, Spender, Garvin, C. P. Scott, Gwynne, and Dawson, gave their readers what they thought they ought to have, not what they wanted. Bright accepted this fetish of parliamentarianism: "I should fill every paper with debates. . . I would have no editorial leading articles, but leave the readers to form their own conclusions from what they read for themselves". As late as the 1870s, the *Manchester Guardian* gave two unbroken pages, without paragraphing, to a verbatim report of a speech by Disraeli — the sort of attention only a minor spy case can command today.

The removal of the stamp duty removed the press from the context of radical agitation and illegal publication, often ingenious in method. One organ, the *Pocket Handkerchief*, was printed on cotton to circumvent the law; another evaded justice for a time by containing nothing that was radical. The radicals clamoured for a cheap press for fifty years. When they got it, they made little use of it. The supposed organ of the trade unions, the *Beehive*, had a minimal sale, and was kept going by a millionaire. The Nonconformists never really established an alternative cultural identity. *The Daily News* was aimed at the Nonconformist market, among others, but it never became more than one of many Liberal papers. It lacked great editors, and it lacked clear guidance from the Liberal leaders. (Gladstone, significantly, preferred the less ideological *Daily Telegraph* for his ideological.) There was also a *New Statesman*, shaped "black hole" in the form of the absence of an intellectual radical weekly of high standing. Even when the mass circulation evening paper, the *Star*, hit London in the late 1880s, its semi-socialist success depended on Brunner of the future ICI, and Colman the mustard king. No millionaires, no socialism. The distinctive absence of a dissident intellectual, even in the low taverns of Fleet Street, emerges as one of the main expectations of the character of the British press.

It was the official politicians, not the radicals, who really needed a collective press. With Parliament not sitting for half the year, the press was

the only way politicians could influence public opinion for much of the year. It was much easier than platform speaking. They need only give a hint, and an editor would polish it up into mandarin but unattributable prose. The supposed lack of public speaking before the 1880s falls into place only when it is realized that the political air was always full of noises, for those with ears to hear. The editors might be running a mass press, but high politics was the very air they breathed. Even in Edwardian times, editors like Gardiner, Spender, Garvin, C. P. Scott, Gwynne, and Dawson, gave their readers what they thought they ought to have, not what they wanted. Bright accepted this fetish of parliamentarianism: "I should fill every paper with debates. . . I would have no editorial leading articles, but leave the readers to form their own conclusions from what they read for themselves". As late as the 1870s, the *Manchester Guardian* gave two unbroken pages, without paragraphing, to a verbatim report of a speech by Disraeli — the sort of attention only a minor spy case can command today.

Politicians and late Victorian journalists shared the same culture and made their readers share it too. The penetration of journalism by vanity men with a full command of the Victorian cultural apparatus was a sign of the expanding cultural hegemony of aristocratic values in the period. Reaching the right circles always mattered more than circulation. After 1850, as John Gorton showed in his book *The Rise and Fall of the Man of Letters* (1969) journalism could afford to pay gentlemen, and enabled them to take their place in country house life and clubland. The *Pall Mall Gazette* (founded in 1865) "written by gentlemen for gentlemen" was a landmark in the arrival of intellectuals in Fleet Street. The departure of Leslie Stephen from Cambridge, and John Morley from Oxford, in search of the greater rewards of London, was a portent. So was the 1880 election, when for the first time an appreciable number of journalists were elected (fourteen).

By the 1890s, there was even, for the first time for fifty years, an important school of Conservative higher journalism (Mallock, Truitt, Esconi, Saintsbury, Courthope,

Maine, Henty, Austin) which was to be curiously linked with the emergence of English as a subject — the argument being, apparently linked with thought, it was desirable for universities to find a subject matter from that defect. The arrival of university men of letters on the journalistic scene brought to Fleet Street stock of ideas, the conservative university parties and money teaching, academic, political, religious, and made the university a broad sense a crucial part of the public. Yesterday's tutorials become tomorrow's editorials.

Rising payments attracted journalists, too, to the journalistic pot. Salisbury, who was displaced by his family for a time for me into the middle class, wrote on pieces in the *Saturday Review* on topics as diverse as "Making Mummies", "Proverbs German Jews", and "The Man Mayfair". Gladstone was a journalist whose works filled volumes. His colleagues exacted slightly comic outpourings of grounds that he needed the *Harcourts*, the Liberal leader, a leader-writing for a London *21*. Bright, none too happily on whiled away the hours at the *Star*. Lowe overcame the inability of being a don, an alien returned colonial, by writing *The Times*, rising to become editor of the *Essex*. Lord Clarendon was paid £2,300 twenty articles written on his tour. The press not only gave aristocratic values, it supplied ruling class incomes.

Journalists in turn found public worth cultivating. They were ours, and by the 1890s were given in fair abundance. In *Le* Austin's case, Salisbury would the Poet Laureate for the rendered and leaders written. In the *Manchester Guardian* provided a safe haven for journalists. They gave civil servants to old warhorses like Sala, and Greenwood. They gave the hint round when journalists work, or were sacked, all of common occurrences in Fleet Street. If all else failed, the journalists tried to keep the literary flag which men of cabinet rank played large part. Above all, access to powerful provided paragraphs for free lance contributors, while a small fry and hangers-on of the within clubland and *Pall Mall* gained useful pickings simply canvassing. There was a line of distinction between the journalist who needed to look for gentlemen, and the gentleman for equally cogent financial needed to behave like a journalist.

Professor Koss advises us to identify the provincial press arrived late — *Manchester* had a daily of its own until 1870 and its heyday was brief. By 1870 and 1890, was able to *Telegraph*, it was able to *Telegraph* with the London *Telegraph* failed to establish an independent political influence. Gladstone seems, was wrong in 1880 to a favourite distinction between a optimistic Liberal minority of provinces, and the defeat of a Gladstonian tone of the *Telegraph* chief: through money, *Telegraph* the *Daily Telegraph*. Gladstone wrote, conveniently forgetting the days in the 1860s when he had been and when it had christened him "People's William".

Crooked collusions between politicians and journalists in the essence of the political press (How could it be otherwise?) are no whit secreted here. Scott, "Lloyd George's conscience" was deeply committed to the right Lancashire politician. The right press, financed by millionaires

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BOOKS

Everyday Shakespeare

Shakespeare and Tragedy
by John Bayley
Routledge & Kegan Paul, £9.75 and £4.95
ISBN 0 7100 0632 2 and 0607 1

John Bayley is dissatisfied with a good deal of recent writing on Shakespearean tragedy. In particular, he deplores the readiness of critics to escape from the moment-to-moment impressions of theatre into metaphysics or morality or genre. Against general judgments and rhetoric, Bayley enters a plea for ordinary awareness; he sees Dr Johnson as a more natural ally than Wilton Knight. Yet *Shakespeare and Tragedy* is far from ordinary in its tactics or expression; it is unapologetically clever, full of insights, sharply and even disconcertingly fresh in its judgments, but eccentric too and occasionally blurred and indulgent.

Bayley's study opens with what amounts to a meditation on the Dover Cliff episode in *Lea*. There the everyday world, perceived with delight, confronts the stereotypes of tragedy. Such displacements characterize much in the play: Cordelia's death, for instance, is not death-in-tragedy but death itself. The incompleteness of the play's language, even the inarticulacy of drama, become a main part of the tragic effect. Bayley goes too far, perhaps, when he claims that *Lea* is "in many ways Shakespeare's most realistically rural and domestic play", yet the emphasis on ordinary occasions and ordinary feeling seems to me valuably corrective and humane. *Lea* emerges as a great Jackdaw's nest of a piece, with its untidiness and seeming indiscipline contributing much to its expressive-ness. One understands Bayley's eloquent complaint that in *Lea* Shakespeare was not in earnest in the way that in their major work Dante and Milton were in earnest.

There are good things in Bayley's treatment of *Hamlet* and *Macbeth*. Where the Roman plays are tragedies of construction, he shows us, these are tragedies of consciousness. Such

works display "areas of infinite possibility: menace, relief, the untoward, and the unlooked-for saving and mercy—all seem possible or imminent". The hero's mind is both liberated and bound. *Macbeth* is "the involuntary consciousness of mind and life"; he is also the plot's "credulous villain" and "victim". Bayley reconstructs the paradoxical relationships between hero and villain, and between pity and fear, in illuminating ways. His reading of *Titus* and *Cressida* more directly nudges us out of received notions. This is by no means a bitter play; Shakespeare's "effortless good nature" merely sees things the way they are and translates that knowledge into the murkiness of style. Not everyone will be convinced, yet Bayley's emphasis on the vivacious good humour of the early scenes usefully challenges a lazy response. On *Timon*, Bayley is wholly persuasive. The play fails because "what it is about swallows the entire action". Here Shakespeare practices "the immediacy of art" and so produces a play of "disconcertingly faceless exuberance". Lacking the consequence of Shakespeare's truest tragedy, *Timon* provides a hero who displays not consciousness but a certain state of mind. A sense of "something hurt" pervades the tragedy, but feeling has not been tested against the variousness of fact and society.

Bayley cannot be counted among those critics who are intimate with acting and the stage. It shows, for example, a misunderstanding of the actor's skills to assert that in almost all plays, if not in *Lea* "acting must repeat each evening the big moment". It is wrong, too, to say of Chekhov, among others, that his plays "are designed to render specific effects which actors in the theatre can give, and to transmit certain ideas to the audience". Nevertheless, Bayley's attention to natural feeling and his alertness to the detailed impressions of the text, do mesh quite often with the actor's needs. For example, he comments that when *Macbeth* puts to Lady *Macbeth* arguments against the murder, they are not arguments he thinks will appeal to her but "the

arguments that come to him in her presence, which is a very different thing". It's a distinction an actor can use. Or again, he insists that Gertrude loves Claudius in a fashion that is not to be mocked; even after she knows what he has done, he remains for her an object of love. The actress of Gertrude needs such an assurance, if she is to play the part convincingly. Bayley's analysis of Polonius and his children leads him to the conclusion that "they are what is known as a close family", an insight convincingly demonstrated in John Barton's current Stratford production. It is good to have an academic study that in its views confirms the discoveries of the stage.

There is a paradox or even a contradiction somewhere close to the centre of *Shakespeare and Tragedy*. Bayley defends the ordinary and untheatrical in our response to the plays, yet his ideal audience, it often seems, would consist of dons of Jamesian powers of discrimination, and his actors would become marionettes articulating Shakespeare's words. He has little time for Brecht: *Coriolanus* is "boring and predictable", utterly lacks humour and is "dramatic". Yet there is something Brechtian in Bayley's response to the tragedies: a detached, shrewd, very clever reading of their human and social conflicts, and a strong sense of the lines of denaturation (rather than interplay or congruity) between art and the everyday. It is revealing that Bayley persistently uses the term "unlookers" in place of "audience"; audience might seem too homely and too engaged.

The publishers offer *Shakespeare and Tragedy* as the book for our generation, as studies by Bradley and Wilson Knight were for theirs. There is much in the book that is subtle and even brilliant, yet it is too indirect in approach and expression, and in the end I think too uncertain of its own premises, to rank with these earlier, central, studies.

J. R. Mulryne

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Prophet of the body

Walt Whitman and the Body Beautiful
by Harold Aspin
University of Illinois Press, £11.95
ISBN 0 252 00799 9

When, in "Songs of Parting", the sequence he chose to round out *Leaves of Grass*, Whitman offered the unexpected line, "Cameras, this is no book/Who touches this touches a man", he spoke no less than what he believed the almost literal truth.

Right from the start, the anonymous first edition of 1855, Whitman conceived the overall poem as a body—"physiological", erotic, angled to provoke and arouse. To anyone taken with Barthesian notions of the reading act as *jouissance*, that might seem an unexpectedly familiar note. But not only does *Leaves of Grass* offer itself as "bodily" in imaginative form, it calls throughout upon a pervasive thematic set of allusions to the body, to sexual process, health, re-birth and physical recovery. Typical of Whitman's language are phrases like "procreant urges", "amativeness", "love-spendings", "myself a visionary/With majestic limbs, and plumed beaming eyes". He put matters succinctly enough when, as a preface to the 1856 edition, he used the open letter he had written to his no doubt deeply startled "Friend and Master", Ralph Waldo Emerson, a wholly proper Bostonian as well as Transcendentalist luminary. "The body of man and woman", he wrote, "is so far quite unexpressed in poems".

These un-Victorian sentiments, with their echoes of Blake and anticipations of D. H. Lawrence, Whitman explored perhaps the most vividly in the sexual sequences of "Song of Myself" and in his "Children of Adam" and homophylic "Calamus" poems, major elements in his larger programme of calling for "perfect men and women" to people a millennial, sexually healthful (and probably androgynous) America. Whitman,

then, as self-conceived prophet of the body, as sexual visionary and healer—not only the *persona* of "dreser of wounds" but an actual victim of several paralyzing strokes in his own later life—even Whitman as fudist, give Mr Aspin his focus in this lively new study. He inquires closely and persuasively into Whitman's interests in all manner of developments in medicine, especially during the Civil War years, and in popular-health movements, pseudosciences like phrenology, pathogeny and spiritualism, and in the burgeoning nineteenth-century curiosity about electro-magnetics and mesmerism. His study, essentially, is thus a work of excavation, a tracing of those images which mark out nearly all Whitman's writing of the poet as a giver of bodily health and sanity.

If Mr Aspin ventures no unduly new discoveries about Whitman's mysterious New Orleans years, or about his actual sexual make-up, he does offer a mine of information on how Whitman and his age thought of medicine, hospitals, sexual and racial evolution, race and femininity. He looks, too, at the sources of Whitman's compassionate feminism and at the projections in his poems of the American woman as mother, "male" or prostitute. Whitman's own deeply feminine nature, evident in his love letters to Pete Doyle, and his wish to be understood as a wholly "democratized" sexual figure, undoubtedly gave him a special empathy.

There are irritations in this study, the flattening-out of the poems occasionally, a penchant for endless hyperbole ("Whitman as 'carpenter-poet', 'physical-culture hero', 'Christ-like carpenter-muse' and the like), and a seeming dimity about judging the efficacy of Whitman's "body" imagery. But for the better part, this is source information aptly applied.

A. Robert Lee

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In defence of narrative structure

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Samuel Morley and Caubury, was particularly dependent, because it lost more money. The godly "cocoa press" ran into controversy over its soft-pedalling of cocoa imperialism in West Africa. The best examples of free political journalism in fact come from the founder of the new journalism, Stead, who "felt the clear call of God's voice: 'Arouse the nation or be damned'. God calls. . . to the only true throne in England, the Editor's chair, and offers me the real sceptre". And from the founder of the *Daily Mail*, Lord H. St. John, who concentrated on circulation, a very unusual thing for a proprietor to do.

Professor Koss has discovered a new power in the constitution, a power greater than journalist, proprietor, or politician. We do not even know his name. He is the man at the Central News Agency who decided whether Victorian politicians were to be reported verbatim, at medium length, in brief, or not at all. He created news values as V. H. Smith's have a little man who decides what books will be popular. A major political figure was one whom a news agency reported verbatim. Lord Randolph Churchill fell into this category, though he had never held office; the leader of his party did not. Quite clear rules were laid down about who mattered, and who did not. It is a concept of democratic fame, and popular judgment, about as reliable as that used to compile the list of the Top Twenty records. What makes a politician climb the charts, is the charts themselves. Well might Prince Albert tell Disraeli, "The country is governed by newspapers, and you have not got a newspaper".

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Narrative and Structure: exploratory essays
by John Holloway
Cambridge University Press, £9.50
ISBN 0 521 22574 4

Recent exciting events in Cambridge have aroused a general curiosity about literary structuralism which the desperate glosses offered in the heat of the moment by the Sunday newspapers can have done little to allay. Those who remain baffled to know what all the fuss was about could do worse than turn for enlightenment to this modest, clear and fruitful little book.

Narrative and Structure has, for a start, a number of striking negative virtues. Professor Holloway does not, for instance, adopt the pose of one instructing his benighted fellow-countrymen in what they are to believe as necessary to their salvation. There is no potted exegesis of Chekhov, Barthes, Greimas, Jakobson et al., and none of the talismanic name-dropping that goes with it. The proportion of methodological and programmatic discussion to actual critical engagement with texts is strikingly low. In fact, all that Holloway offers in that direction is one short concluding chapter, which contains a low-key, but interesting and telling general defence of the relevance of questions of narrative structure to literary criticism.

The rest of the book consists of five essays (seven if you count the two substantial appendices), each limited and precise in scope and clear in presentation, which apply quasi-mathematical and quasi-linguistic techniques to the analysis of narrative structure in a wide variety

of texts (they range from a story by Boccaccio to one by James, and from *Phedre* to nineteenth-century political oratory) in a way which allows the reader to judge for himself the results of such methods. I use the phrases "quasi-mathematical" and "quasi-linguistic", incidentally, not with the intention of delivering a passing side-sweep to the book on the grounds of sloppiness, but rather to draw attention to what strikes me as one of its negative virtues, namely, Holloway's pervasive and accurate sense that the application of the formal languages of linguistics or set-theory to literature cannot be undertaken mechanically, as a mere extension of the existing domains of the language in question, and seldom produces a reductive assimilation of one subject-matter to the other.

Many French structuralists, including Barthes and Todorov, have analysed narratives as sequences of events roughly expressible by verbs of action. Holloway's central thesis is that such an analysis in terms of "actions", besides being, in a sense, arbitrary—"Anything whatever in a fiction can be treated as the 'what happens' of that fiction" (page 53)—very much oversimplifies the process of reading narrative. Holloway's preference is for an analysis of the structure of narrative which will allow us to talk about the relation between the events which take place in a story, the background of assumptions against which the reader encounters those events (which includes both assumptions brought from outside the novel and information "deposited" by the novelist in the text), and the fluid and continually altering set of possibilities,

expectations and suppositions aroused in the reader by events, given the general background of assumption (Holloway introduces the useful Scots legal verb "to propose" to capture the relationship between an event and the range of possible outcomes which it suggests to the reader's mind), at each successive stage of the narrative, "stage" being understood cumulatively.

This is a healthily complex basic description of what is going on when we read narrative: sufficiently complex to ensure on the one hand that Holloway's "mathematical" descriptions of the structural relationships to which it gives rise can be no more, at best, than useful expository analogies, and at the same time sufficiently complex to do some real critical work. Certainly some of Holloway's critical insights seem interesting and convincing. In chapter four, for example, there is a suggestive account of what relates stories by Chekhov, James and Lawrence both structurally and as "fiction of ideas", in terms of different levels of narrative sequence; and in chapter two a striking analysis of the plot of *Phedre* as a rigidly exhaustive structure of narrative possibilities which does, I think, partly account for our sense of enormous passion and drama contained within an inexorable sequence of unrolling events in a play in which—in one sense—practically nothing happens.

Less successful, to my mind, is Holloway's treatment of Muriel Spark's novel *The Prime of Miss Jean Brodie*. Here he wishes to claim a systematically causal organization for the book: "Every link in the diagrams, whether from one item in a run to the next consecutive one, or

from one run to another, begins to be confirmed as a causal link". I have my doubts about this as an account of a fiction which works in part through the creation of uncertainty about causal questions. It doesn't seem to me at all clear why, causally speaking, Sandy becomes a nun, why she betrays Miss Brodie, why Teddy Lloyd's paintings end up looking like Miss Brodie, and so on, and I think this lack of clarity is intentional on Muriel Spark's part. Lurking somewhere here, perhaps, is a larger question for structural criticism of this kind. Its whole thrust is towards representing the interpretation of narrative as a rigidly determined, almost algorithmic process, analogous to grammatical interpretation of sentences as represented, for instance, by transformational-generative grammarians.

In one way this strikes me as an entirely welcome tendency, since it works against the prevalent idea that the interpretation of literature is a wholly subjective process, without anything in the way of generally agreed and accessible rules or principles, pursued by a critical priesthood in a dim religious light. But on the other hand it does increase the temptation to ignore the role of silence, ambiguity and paradox in literature, and in that way to oversimplify the relationship of reader to text. It would be odd, however, if one found nothing to disagree with in a book as fruitfully and intelligently inventive as this one.

Bernard Harrison

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BOOKS

Our anxiety to please

Social Mobility: a study of social control and instability
by Earl Hopper
Blackwell, £24.50
ISBN 0 631 11031 3

The title of this book is misleading, since it encourages one to expect a study of the extent and rates of social mobility, whereas the book is, in fact, devoted to "characteristics... usually discussed in terms of 'feelings of alienation' and the 'disintegration of social networks'". It is as a factor contributing to these feelings that social mobility figures in this research.

The substantive thesis would appear to be that feelings of relative deprivation and other anxieties result from the absence of clear normative standards, thwarted aspirations and an unfavourable level of achievement compared to family and friends, and that these are, in turn, associated with certain patterns of mobility and non-mobility characterized by inequality between income, occupational prestige and the kind and amount of education. This thesis is supported and illustrated (though not tested) by a survey of just over two hundred men who had graduated from either Cambridge, having entered from grammar or public school, or Leicester, having attended grammar school, or who had entered the labour market immediately after leaving school either with three O levels or without. When interviewed, the men were in their mid-thirties.

The findings were complex, but in brief they were: that striving for achievement is not, in itself, anxiety-producing; that it is the discrepancy between a person's normative expectations for highly-valued goals and their

actual achievement that produces anxiety; that when a person's achievement is compared to those of his family and friends, anxiety is distributed along a downward sloping M-shaped curve, so that the greatest comparative differences produce less anxiety than modest differences, and less even than no differences at all; that various patterns of mobility are associated with differing levels of anxiety, so that those graduating from Cambridge, having attended public school, and now in upper-class occupations, are more anxious than those Cambridge graduates from grammar schools who are now in upper middle-class occupations; that when patterns of mobility interact with an absence of clear normative standards, thwarted aspirations and are unfavourable comparisons, these are associated with patterns of anxiety; and, finally, that to be employed in some sectors of the economy, such as distribution, is worse in these respects than to be employed in others, for example, education.

Above all, what the research conveys very well is the sheer complexity of the association between anxiety and mobility and non-mobility. As Hopper justifiably complains, research has uncritically treated mobility as a single unitary phenomenon, instead of appreciating the diverse routes through which people can become mobile. If he has only succeeded in revealing the scale of complexity, his contribution is substantial. In discovering the M-shaped relationship between anxiety and the comparative achievements of family and friends, he has at least ensured that theorists can no longer assume a simple linear association.

Of course, I have some reservations. His operationalizing of many variables seems too dependent upon presump-

tions at each level; the interpretation of some tables seems questionable; and particularly regrettable is the frequency with which he appeals to evidence unavailable to the reader.

But these are trivial objections when compared to the outstanding drawback of this book, its lack of clarity. I said earlier that "the thesis would appear to be...", because even now I am unsure exactly what the thesis is. This is not, I believe, because the argument is subtle and the ideas complex, but because their presentation is opaque.

This opacity comes from two sources, the first being the attempt to compress two books into one. The book shifts uneasily between the research report that the book ostensibly is, and the attempt to construct a much wider theoretical edifice, which is, at times, only tenuously connected to the research findings. The two become entangled because theoretical points that are indeed germane to the central argument are elaborated and embedded in a much wider argument that goes well beyond the data. Thus, for example, the author makes the important observation that there is a structural dilemma in encouraging people to aspire to high status and reconciling them to their more modest achievements, but then goes on to propose comparative hypotheses, regarding the way this dilemma is manifested in the USA and Britain for which there is no comparative data. I would have clarified matters considerably had these two projects been treated separately.

The second source of opacity comes from the style of presentation, especially the terminology, which is often abstruse and unwieldy, reminiscent of the ugly sociology of the 1950s and 1960s. The author's argument too has

many of the characteristics of these best-forgotten days, being often repetitive and sometimes utterly obscure, as, for example, when he says "If an actor is unable to fulfil the demands of a blocking factor, he is likely to become blocked". His wider theorizing is, moreover, all too frequently reliant on unsubstantiated assertions, such as that the lower status groups are normatively receptive to authority and therefore tend to accept a sponsorship system of mobility, which is hardly self-evident. It is indeed strange that one who has profitably used his empirical research to reveal the unappreciated complexities of actual patterns, should indulge in this kind of speculation. All of this is not helped by the confusing numbering of headings and sub-headings which can leave the reader floundering around trying to find his bearings.

There is another sense in which the book is reminiscent of the fifties and sixties, and that is the author's preoccupation with theorists of that era: Turner on sponsored and contest mobility; Lenski on status crystallization; Seaman on alienation; and Merton on anomie, all figure as major protagonists or champions. It is as if the sociological world stopped when Hopper left the USA in the early sixties.

These drawbacks, I fear, make the book less read than it deserves to be; used selectively as a research reference, it should prove a worthwhile contribution to sociological understanding.

P. A. J. Waddington

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Soap opera as myth

The Message of Television: myth and narrative in contemporary culture
by Roger Silverstone
Holt Rinehart & Winston, £14.50
ISBN 0 435 82825 8

We scarcely suspect, sitting at home half-hypnotized by the coloured shadows flickering across the rectangular screen, that countless generations of humankind have sensed just such compulsive qualities in the vicariously experienced dramas of myth, listened to at night around the comforting campfire. Such at any rate is the burden of this skillfully argued study of television in present-day culture.

Although McLuhan contended in the early sixties that television effected substantive changes in viewers' cognitive habits, his argument reposed exclusively on the technical peculiarities of the new medium of popular communication. Silverstone adopts the more extreme position that the distinctive structural features of folktales and myth are recreated in televised modes of communication. The implications of his argument are of far-reaching importance, suggesting a fundamental continuity in human ways of thought between pre- and post-industrial cultures. The author is aware both of the radical tenor of his theory and of the inevitably partial and provisional character of his research findings, based as they are on the intensive analysis of one popular TV drama series.

Silverstone brings to his lengthy examination of *Intimate Strangers*, a successful "soap opera", a formidable armoury of conceptual tools mainly drawn from Russian formalism and French structuralism. This procedure may smack somewhat of a sledgehammer-and-nut approach to the problem, but the author shows himself able to handle this cumbersome equipment with an admirable lightness of touch. The chapters, fully half the book, in which Silverstone draws together and demonstrates the essential convergence and cumulative achievements of Propp, Lévi-Strauss and Greimas will prove of lasting value to students of oral narrative.

For Silverstone the distinguishing features of myth are the presence of a logic, a synchronic system constructed, in Lévi-Straussian style, from binary oppositions; and of a chronologic, a narrative system composed of sequential combinations of the synchronic elements. Silverstone finds these mythical features prominently displayed in the structure and dynamics of his chosen example of television as a popular art-form. The domestic drama *Intimate Strangers* is played out within a framework of familiar conceptual oppositions: culture/nature, death/life, male/female, distance/proximity, city/garden. The narrative moves through a succession of posed and resolved contradictions arising from the various underlying and pervasive oppositions. "The city is the jungle and the journeys to and from it... are fraught. Why else would Joan put on her fur coat to travel to London?"

In setting out to disclose the lineaments of myth behind the technological sophistication of television Silverstone has no intention of denigrating the medium and its millions of viewers. Beyond its ideological manipulation in the interests of powerful interest groups in modern mass society, Silverstone sees the myth-making faculty as serving the same human and social function today as in past eras. Its perennial purpose is to impose order on disorder, to draw boundaries and set limits on what appears as formless and unmanageable, to enable the incomprehensible and therefore the terrifying to be comprehended and made less terrifying. As with myth in its archaic form, the remedies are always ephemeral: new problems, new contradictions incessantly emerge, calling for new mythical solutions. The constant eruption of frightening novelty in present-day society makes its mythical control more necessary than ever in history. Television, Silverstone believes, is meeting an ancient and fundamental human need by mythologizing our perceptions of the world. The thesis is striking and persuasive.

Roy Willis

Roy Willis was until recently reader in social anthropology at the University of Edinburgh.

Neglected sorority

The Sociology of Women: an introduction
by Sara Delamont
Allen & Unwin, £8.95 and £3.95
ISBN 0 04 301119 5 and 301120 9

Though women make up over half the population of Britain, they have been largely neglected in sociological writing. The few serious studies of women have tended to focus on their reproductive roles rather than on their education, paid employment, leisure, politics and aspirations. The social science fraternity has concentrated on husbands, sons and brothers, placing far more significance on the class than on the sexual divisions of society.

In the last decade these assumptions have been challenged, but Sara Delamont has written the first introductory text to examine as a whole the social position of women in modern Britain; a pioneering task given "the large blank space in almost every textbook where... should be considered". Where, for example, can we learn about the school lives (rather than the sexual delinquencies) of adolescent girls? The change from girls' high achievement in primary school to their relatively poor performance in senior secondary classes represents extraordinary educational wastage. Given that girls like school more than boys, and that most will be employed for large parts of their adult life, why do they tend to reject the offerings of the educational system at the earliest opportunity?

Delamont is determined that we should be sceptical about much of the work which purports to describe and explain female behaviour. Household mothers, for example, have two conflicting stereotypes described both as acutely vulnerable to psychiatric illness and, at the same time, as the necessary foundation of healthy family life. Why is it that women's political beliefs are measured against their husbands' rather than their own right? Why should data which is used to prove them conservative, or just not interested, be also employed to show them as fickle, and prone to irrational changes? There is no shortage of tantalizing conundrums and worthy subjects for a decade of PhDs.

Juliet Cheetham

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Classroom innovations

Evaluating Curriculum Proposals: a critical guide
by Digby C. Anderson
Croom Helm, £10.95
ISBN 0 7099 0248 4

This book is the first in a new series presenting less orthodox work on the methodology of curriculum research and findings including interesting PhD theses from both sides of the Atlantic. Digby Anderson claims to offer new ways for teachers to assess the value of curriculum innovations and materials which is showered on them by educational researchers, social scientists and policy-makers. By offering teachers essential tools for analysis, this book is supposed to help them answer self-questions, do the innovators' practical classroom contexts; is it research work adequate and is it really offering anything new? Yet if I were to ask the same questions of this book, the answer would be a resounding no.

Anderson's book is couched in the anti-positivist tradition, with which he has no quarrel. Much curriculum research has claimed to be "scientific", distancing itself from teachers and classrooms by creating a spurious gap between the expert (the researcher) and the inexpert (the teacher). This is essentially true of the "objectives" product model of the curriculum which relates content, materials and evaluation back to a detailed range of objectives which form the key part of the programme. Originating in the USA, this approach has had some influence here and may become even stronger in our obsession with testing, gathering momentum it has already in America. But Anderson is critical of most projects because they claim an authority beyond the displayed research work. He argues that much of the presentation of curriculum projects is grounded in rhetoric and his book is therefore a detailed analysis of five Schools Council projects and research books, namely, *Moral Education in the Secondary School*, *The Humanities Curriculum Project*, *Religious Education in Primary Schools: discovering an approach*, *Health Education Project 9-13*, and a "research study", *Man Media and the Secondary School*.

He guides us through a close textual analysis of the language, style and ideas of these projects, illustrating how he thinks teachers can use this technique to tease out the hidden ideas contained in them. Far from being illuminating, I think this book will cause most of its readers to pluck themselves as they consider some of the banal and somewhat ludicrous observations which Anderson presents as aids to understanding. For example, there is a copy of the front page of *Moral Education in the Secondary School* at which we are invited to glance in order to see the positioning of the letters, the style of the print; contents lists are analysed. We are even told that the copy of the book the author used was from a library and that there had been, according to the issue slip, 29 previous owners. This is supposed to tell us something significant about "what sort of book this is".

Readers familiar with the competing perspectives of the 1970s in sociology and the sociology of education will know that Anderson's arises from the ethnomethodology of Garfinkel, Cicourel and others. Many of these attempts at describing or demystifying the common-sense world of everyday life ended up by confusing and mystifying to an even greater degree. There are far more important things for sociologists of the curriculum to be doing and far more compelling approaches than the one we are offered here; approaches which clarify the links between the curriculum and its economic, political and ideological contexts, for example.

Though welcome as a text on a sorely neglected subject, this book is also a disappointment in failing to meet the standards Delamont rightly demands of other sociologists.

Barry Dufour

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BOOKS

Live metaphysical problems

The Nature of Mind
by D. M. Armstrong
Harvester Press, £12.50
ISBN 0 7108 0027 4

This is a collection of ten recent philosophical papers by David Armstrong. Each of them shows Armstrong's characteristic manner; they get right to the point and deal with it with a clear directness which might look easy to anyone who had not himself tried thinking or writing about these topics. Each is worth reading, and a couple are admirable. This doesn't make a book of them, though.

Only the first five papers are really about the nature of mind. They restate and defend Armstrong's view essentially as worked out first in *A Materialist Theory of the Mind*. These five overlap considerably, not having been written to be printed together. Three of the remainder are about perception. Again there is considerable overlap between them, and this makes it harder to read them patiently, though one of them, "Colour Realism and the Argument for Microscopes", is a marvel. The last essay, on the weighty topic of "Naturalism, Materialism, and First Philosophy", is evidently intended to show the grand design that holds them all together. Its failure in this aim is inevitable: the issues are really varied and very hard, and to discover what unifies them Armstrong has to introduce new and controversial ideas, which he cannot really dispose of in some fifteen pages.

I am not sure what purpose Armstrong and the publishers intended this book to serve, but it seems to me ideal as a source of material for persuading non-philosophers and philosophy students that there are still lots of live unanswered questions about central metaphysical questions, and, in fact, that the more science we do the more such problems turn up. In particular, the first three essays should persuade anyone that materialism is both a live and a controversial option in the philosophy of mind.

Armstrong defends the analysis of all states of mind (beliefs, desires, emotions, memories, and so on) as dispositions to behaviour, which take hold of a person in virtue of underlying states of the central nervous system. This is neither simple materialism nor simple behaviourism, because it is consistent with the possibility that we will never be able to specify precise conditions for, say, thinking a particular thought or having a particular reaction to a situation, in terms of what one actually does or what specific bits of one's brain are doing. In fact, the discussion has in places a curiously Cartesian flavour. He defends, for example, the intelligibility of what amounts to acts of will (as accompanying all intentional actions); there's a surprisingly good respect for the accuracy of what people say about themselves; and at one point he seems to require consciousness to accompany an extremely wide range of their states, including all mental activities, if I am reading him correctly.

The reason for this, I suspect, is that the main achievement of the materialism that Armstrong and others developed some years ago was to make it possible to claim that states of mind are things they don't intuitively seem to be, without thereby committing oneself to any revision of the way one uses the ordinary words for these states. It allowed one to be metaphysically adventurous and conceptually conservative, with the result that features of an old-fashioned way of talking about mind (which philosophers and philosophy students that there are still lots of live unanswered questions about central metaphysical questions, and, in fact, that the more science we do the more such problems turn up. In

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during and original suggestions. This is not a problem if one's main intention is to state a defensible materialism. It might be a problem, though, if one thinks that a main function of philosophy is to improve the ways we think about things.

The essays on the philosophy of mind, in particular the first two, are ideal reading for students. The essays on perception are just the thing to hand to any scientifically-minded person who needed convincing that there are philosophical issues he ought to take seriously. Larger, subtler, or more technical issues about materialism could not be dealt with in a book of this kind, though Armstrong does try to provide an account of one rather recent topic that he has elsewhere developed at length; he thinks that a scientific materialism requires that one take properties of objects (their masses, locations, even their colours) to be objectively existing things, and not just features of our descriptions of the world. The last essay tries to discuss this, but the issue (like those discussed in another essay, "The Nature of Tradition") is essentially larger than the space he can allot to it.

While it is worth having this collection there is a more useful book to be got from the material. By beginning with the third essay, on the materialist's battle-lines, combining the first two essays into one, eliminating repetitions from the essays on perception, and expanding the last one so that it really explained its point to a naive reader—and leaving out everything else—Armstrong could produce an *Everyman's Guide to the New Materialism*. It would be short, clear, irritating, and one would press it on students and non-philosophers. Perhaps he will do it yet.

Adam Morton

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Nietzsche's 'careful rapture'

Nietzsche, volume one: The Will to Power as Art
by Martin Heidegger
translated by David Farrell Krell
Routledge & Kegan Paul, £11.50
ISBN 0 7100 0744 2

Between 1936 and the middle of the 1950s Heidegger delivered lectures and wrote essays on Nietzsche which were published in Germany in 1961. In 1971 Pierre Klossowski's acclaimed French translation appeared. Another decade later English readers can acclaim the first of the four volumes of a translation by David Farrell Krell. This, the accompanying analyses and the other interpretative aids maintain the high standard set by his earlier editions of Heidegger's work.

Heidegger once said that he was aiming in his own thinking to bring out what Nietzsche had achieved. It is to be expected, therefore, that these volumes expressly addressed to Nietzsche will reveal as much about their author as about their declared subject.

Although the lectures which make up this first volume are based chiefly on the posthumous collection of remarks entitled *The Will to Power*, the key to them, Heidegger suggests, is Nietzsche's comment that in his first book, *The Birth of Tragedy*, he had tried "to see science under the optics of life". In the years immediately prior to the First World War German academics took this to mean that the specialized sciences must be given greater aesthetic appeal and relevance to practical life. Against this Heidegger argues that the word translated by "science" refers here to knowledge and truth, and that Nietzsche's "life" is a metaphysical, not a narrowly biological or ethical category.

Nietzsche wants to get us to see life as becoming, and to rescue becoming from the inferior status accorded to it by a Platonism which restricts truth to the supersensible. This endeavour to stamp the character of being on becoming receives support from Nietzsche's idea that being is peculiar. Hence the reference to optics. Art and the artist are crucial in this inversion of Platonism because art is the creation of perspectival illusions in the illusory permanence of which Nietzschean truth consists.

Art is also the most intense manifestation and enhancement of life. For the feeling that accompanies artistic creation and recreation Nietzsche uses the name "Rausch", for which Krell uses "rapture". In his sections devoted to this topic Heidegger demonstrates that Nietzsche's so-called physiological theory of art is not at odds with his affirmation of the will to power as a new principle of valuation. There is no real inconsistency because Nietzsche's theory is not cast in terms of physical processes, states or events like neural discharges, nor of these supplemented with inner psychological phenomena. Heidegger interprets Nietzsche's "Rausch" along the lines of his own analysis of moods in *Being and Time*. And his interpretation of Nietzsche's account of the body and its life is much more Husserlian or Rylean than the word "physiology" might suggest. "We do not have" a body; rather we "are" bodily. To say in German that someone is drunk is to say that he has a *Rausch*—a *rauschen* haben—something as in English we say "but a person has a seizure". The artist is enraptured, rapt and seized.

This synthetic distinction fits in with Heidegger's refusal to follow commentators like Klages who imagine they have grasped what Nietzsche intends by "Rausch" when they equate it with Dionysian intoxication or frenzy. The Dionysian which Nietzsche opposes to the Apollonian in his first book is opposed to the Christian in his last. In the first book the opposition is conceived in the light of Schopenhauer's distinction between will and representation. In the last book the Dionysian combines both extremes of Nietzsche's earlier opposition and is opposed to the denial of feeling he attributes to Platonism and Christianity. The Dionysian is now the will to power which is most naturally expressed in the disciplined elation of the grand legislative style of art.

In support of his gloss on "Rausch" as careful rapture Heidegger quotes Nietzsche's Wordsworthian aphorism: "One does not get over a passion by portraying it; rather, the passion is over when one portrays it". This is a reflection on art in particular. In later volumes of this book Heidegger will go on to show in detail how this theory of art is a theory of knowledge and a metaphysics in which the will to power is understood through the doctrine of the eternal recurrence of the same. The final volume will have nihilism as its main theme. By the time the reader has reached that final volume he may hope to have at least an inkling of what Heidegger means when he says in this first that although Nietzsche, at the end of western metaphysics, asks the penultimate question "What is the being of beings?", he does not ask the ultimate question "What is the meaning of being?"

John Llewellyn

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"Christ at Emmaus", an ivory relief from a series of carvings considered to be among the most significant extant works of art from the pre-Gothic Middle Ages, the Salerno Ivories. The series, which depicts episodes from the Old and New Testaments, is reproduced in Robert P. Bergman's *The Salerno Ivories: Ars Sacra from Medieval Amalfi* (Harvard University Press, £22.50).

Unharnessing Marx

Karl Marx: the arguments of the philosophers
by Allen Wood
Routledge & Kegan Paul, £13.50
ISBN 0 7100 0672 1

The history of Marxist philosophy has hitherto provided a sorry spectacle. Some writers, dead to philosophy but alive to the opportunities of propagandizing what they took to be true doctrine, contented themselves with the repetition of opaque texts or complacent, well-rehearsed slogans. More recently, Marx's thought has been harnessed to whatever might be intellectually fashionable in Paris (or Frankfurt, or Rome), resulting often in a crypto-Marxist mishmash of little genuine philosophical interest and with even less regard for fidelity to the texts in interpreting what Marx said.

Allen Wood's very welcome volume is an indication of the fruitful results that are possible when Marx (and Engels, in the case of Wood) is discussed by someone at home in the philosophical style and technique that philosophers here have come to expect as a matter of course. What Wood offers is a highly competent exposition of Marx and Engels' philosophical beliefs, an exposition both philosophically sensitive and grounded in a careful reading of the texts.

Wood constructs the volume around five of the philosophical topics on which Marx and Engels had views: a theory of the self, the nature of historical explanation, morality, materialism, and dialectics. All of the discussions are very good, and some are quite outstanding. Wood's treatment of the notion of dialectic, Marx, and its relation to Hegel's conception is the most illuminating that I have ever read.

Briefly, Wood's Marx holds an essentialist view of the self, believes that historical explanations are teleological in form, is a naturalist and a realist, and works in terms of a sharp contrast between moral and non-moral goods. Wood sketches Marx's views, and (in those instances in which Marx offers arguments for the views) arguments, sympathetically but critically. On all the major issues Wood has got Marx absolutely right. On some issues, such as the form of historical explanation, and realism, similar interpretations have been offered elsewhere.

On the issue of Marx's account of

morality, Wood's interpretation is entirely original. Since, according to Wood, Marx worked with a contrast between moral and non-moral goods, he could consistently condemn capitalism for the non-moral evil it brought, while at the same time debunking morality on the grounds that the morally good was whatever supported the socio-economic status quo. Marx certainly did both condemn capitalism and belittle morality, and traditionally commentators have found the co-existence of these two attitudes in Marx puzzling. Wood's interpretation of what may have been in Marx's mind is convincing, but as an account of morality, either in concept or in fact, it is woefully inadequate. Marx might have been drawn to such a view because so much of what he thinks of when he speaks of morality (or of philosophy, too, for that matter) is really only a very young Hegelian account of that phenomenon. The connection between morality and existing social institutions is nowhere drawn more tightly than it is in *The Philosophy of Right*, and I suspect that Marx's view of morality can only be understood in the light of its influence.

There are occasions when Wood's ideas are left unacceptably vague, when his arguments are incompletely sketched. On such occasions, the introduction of some technical apparatus might have served a useful purpose. For example, Wood insists that a belief like historical materialism can be, simultaneously, a functional ideology (in the sense that its prevalence can be explained by how it sanctions existing social relations or promotes class interests), and rationally held. The two thoughts seem contradictory. Can the belief be rationally held by the very same persons for whom the prevalence explanation is appropriate? The sense of "explanation" is also unspecified, but it seems to be used in Wood's example to mean only "a necessary condition for". This lack of precise specification sometimes made it difficult to assess his suggestions and claims. In any case, if this alleged reconciliation of the two thoughts did work for historical materialism, ought it not also to constitute some sort of exoneration for the claims of morality?

David-Hillel Ruben

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BOOKS

Stalin's most disastrous policy

The Industrialisation of Soviet Russia by R. W. Davies
volume one: The Socialist Offensive: the collectivisation of Soviet agriculture 1929-1930
volume two: The Soviet Collective Farm, 1929-1930
Macmillan, £20.00 per volume
ISBN 0 333 26171 2 and 26172 0

A newspaper under the same proprietorship as this journal might headline this review "The book they said could never be written". It is the first of a new series which takes up the *History of Soviet Russia* where, after 14 authoritative volumes, E. H. Carr ended. "The spring of 1929", he wrote (in the first of the group of books concerned with 1926-29, *Foundations of a Planned Economy*), "is a terminal landmark for the historian of the Soviet Union..."

Though we understand well enough the pressures which led to the decision at the end of that year to embark on the forced collectivisation of agriculture, we know little of the discussions in the inner councils of the party which must have preceded the decision, or of the view taken by any leading politician other than Stalin. Later the fog becomes thicker still and, in spite of a few piecemeal revelations, envelopes all Soviet policy in the nineteen-thirties.

Professor Davies, who collaborated with Carr on two volumes, opens this new series - "provisionally planned as five or six volumes" - with an implicit apology:

while the materials available for the study of political decision-making at the centre are wholly inadequate after 1929, and while many gaps in our knowledge of the economy cannot be filled, abundant information on many aspects of economic policy and development is available in Soviet economic and political journals, daily newspapers and statistical publications, and in accounts by Western eye-witnesses.

The author thus invites us to a certain optimism in place of Carr's pessimism and within his strict limits he is vindicated. The first important constraint is of subject. Davies's title-word "industrialisation" defines his field as "economic policy, economic and political institutions, and the economic and social environment", leaving wholly aside domestic and external politics. He nevertheless shows convincingly in volume one how the party leadership was conducted to adopt this breakneck pace of industrialisation in 1928-9 and analyses in volume two the collective

farm as a "compromise between state and peasant interests (in which) the state predominated, by its power and its material advantages". The overwhelming roles of the party, of the state and of the police in shaping economic institutions are carefully explored, although - at this stage in his chronology - the author prefers not to assess whether those agencies promoted or inhibited economic performance.

The second limitation is of time. The preface to volume one does not make clear the period to be covered: the last volume will embrace "the triumph of planned industrialisation and the consolidation of the economic system from 1934 onward". The phrasing suggests (1933-7) and the Second Five-Year Plan (1933-7) will be covered, but not the chaos of the terror (1937-8) through to the Eighteenth Congress (1939). If so, the author can safely contend that "statistical publications" are on hand for his assessment, for a detailed statistical yearbook appeared until 1936.

Even so, there remains an enormous problem of interpretation. Appreciating that "the increasingly heavy press censorship" of 1930 obscures for the present-day historian the extent and depth of the disaffection, the author performs near-miracles of "reverse engineering" - deducing what the censored person must really have said from the distorted version that appeared in the public press. An intensive combing of the later, including many local newspapers, was practicable during four sojourns in the Lenin and Salytkov-Shechidrin Libraries and Carr especially remarks Davies's penetration by this means of inner-party debates on the treatment of the wealthy peasant (the *kulak*) in July 1929 and on the temporary retreat from coercive collectivisation in March 1930. Carr's "fog" is also represented by the imagery which Stalin's contemporary opponents were compelled to adopt. In one instance Davies may be too cautious in rejecting as "fanciful" the interpretation as containing a *Pravda* article of March 1930 which attacked the paper: the key epithet "short-arms" must surely embody two references to Stalin - to the new ruler of Moscow, a city founded in 1147 by Yuri Dolgoruky ("Long Arms") and to the dictator's well-known obsession with his own lack of physical stature.

Interpretation is also necessary when dealing with material that has appeared in the Soviet Union since Stalin's death, for the "correctness" of collectivisation cannot yet be publicly questioned. Davies has unearthed many obscure writings to cast light on 1929-30. He draws on a book published in "Tad-

zhikistan in 1963, which patently uses party archives in Stavropol. In substantiating the imposition of forced collectivisation targets, he finds a 1975 social survey of Western Siberia, the respondents to which were the children of exiled *kulaks*. He is rightly wary of using a Soviet work (Barsov, 1969) based on archival material, of which much has been made by Elman (*Economic Journal*, 1975). He accepts that on Barsov's indexes (which show that prices of goods sold by farmers increased more quickly than those of goods bought by farmers) farmers should have gained during the peak period of collectivisation, but drily points out that "this shift in money terms was modified by the complete unavailability of most industrial goods in the countryside". He reserves for a later volume a full examination of the inter-relationships of agriculture and industry. In general, the 2,100 bibliographic footnotes to the two volumes testify a thoroughness in research that equals Carr's. It cannot be as definitive until the record is as open.

On at least one major issue, however, Davies's material could bear a construction other than his: whether the Politburo resolved that the drop in grain sales in 1927 was a temporary phenomenon (due primarily to hoarding in expectation of a rise) and were persuaded by Stalin to use it as a pretext for collectivisation on the grounds that it indicated the fundamental unwillingness of an independent peasantry to cooperate with the Soviet state.

Neither in his earlier account with Carr (*Foundations of a Planned Economy*, volume one, part one) nor in the present work, does Davies mention this proposition. But Carr's volume three, part one, states that "in the fear of 1927 something like panic spread to large sectors of the population". On June 1, 1927 the central committee issued a proclamation Kingdom's rupture of diplomatic relations a few days before, declared, "We do not and cannot know when the enemy will openly march with bayonets against the USSR. But it can no longer be doubted that English imperialism is more and more eager to hasten this moment." Trotsky's "opposition platform" three months later echoed the same fears: "a war of Union is not only probable but inevitable." To add to Davies's tangle of foreign eye-witnesses one can cite a sympathetic United States journalist, Negley Farson's *Seeing Red: today in Russia* (probably 1930), reports a peasant's question in a remote fishing village: "when would the war start?"

(page 129).

The natural reaction to a war scare is hoarding and Davies finds new evidence of division among Stalin's Politburo on the degree of permanence of the shortfall in grain marketings. He shows that Kallinin contended that "the worst to be expected was an occasional famine year" and thus gives ground for the view that Stalin forced on his colleagues the presumption that socialism was being undermined by a *kulak* strike, the permanent threat of which could only be obviated by the "elimination of the *kulaks* as a class". The alternative version would have it that - despite a modest deterioration in the state's purchase-price for grain - marketings would have revived as soon as the war scare passed and that Lenin's faith in the price and profit incentives of the New Economic Policy would have been valid for the quarter-century he seems to have had in mind.

If that is a political lesson Davies declines to draw, he delineates an important stage in the erosion of inter-party democracy, for he shows how Syrtsov and Comandare were expelled from the party central committee on the authority of the secretariat alone: not only was the prerogative of a party congress ignored, but the central committee itself was not even convened to pass a formal vote.

Volume two is a detailed examination of the evolution of the collective farm from sources many of which cannot previously have been scrutinized by an historian - certainly not by one as perceptive as Davies. It bears out Stalin's determination to force collectivisation upon the peasantry whatever the cost. The ever more widespread slaughter of livestock in anticipation of their confiscation "could have been brought to an end only by a very firm statement from the highest authorities that livestock would not be socialized". In place of such respite, Stalin ordered priority for the complete collectivisation of livestock - only later were a few permitted for private ownership - and livestock numbers were not to regain their pre-collectivisation level for a quarter-century. Only in 1981 was the lesson at last learnt, when a decree of January 17 authorized collective farms to foster the private ownership of livestock - by gift to young households, by loans to others, and by assuring the supply of feedstuffs to private stock. Such may be the first step, fifty years on, towards radical reform of the most disastrous of Stalin's policies.

Michael Kaser

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Catherine

Russia in the Age of Catherine the Great by Isabel de Madariaga
Weidenfeld & Nicolson, £20.00
ISBN 0 297 7394 1

Although one of the most famous rulers of Russia, Catherine the Great has never received adequate coverage from historians; the largest-scale work before now was produced in 1883. More recently, Soviet scholars have shown little interest in a woman ruler condemned by Marx and Engels, while probably because of her notorious love life, their western colleagues have shied away from giving her the attention that she so doubly deserves, leaving the field largely open to the romantic biographers, whose works have often seemed barely distinguishable from each other. At last a full measure of justice has been done by Isabel de Madariaga, whose book resembles these mostly worthless predecessors in its first paragraph only. It quickly moves on in a short prologue to cover Catherine's life from her birth as an obscure German princess in 1729 to the eve of her seizure of power in 1762, and then becomes not so much the story of her life and loves (except when of wider significance) as a detailed analysis of her policies as Empress of Russia up to her death in 1796, and of their eighteenth-century context.

Dr de Madariaga aims to describe her subject as it really was, to give the facts. Such an approach has its advantages. Making use of the considerable amount of relevant monographic literature produced in the last decade or so by Marc Raeff, S. M. Tret'yakov and others as well as of her own wide researches, she has produced a nearly always reliable and virtually comprehensive exposition of all major facets of a long and busy reign, ingeniously combining a thematic approach with the appropriate chronological context. The book will be a revelation to those whose knowledge of Catherine has never been able to get far beyond the boudoir, while even self-styled experts on eighteenth-century Russian history will have much to learn from it.

Among the latter, no doubt, there will be those who will carp at errors of fact that will inevitably exist in any such full-scale analysis. To take two very important pieces of legislation concerning the nobility, for example: the Table of Ranks did not make education compulsory for all members of the class, while the Emancipation Manifesto did so make it. More seriously, Ideologues will object that nobody can describe even yesterday as it really was, let alone two hundred years ago, without some world view, and, for all her disclaimers, Dr de Madariaga does introduce into her work a number of interpretative assertions. To take again the example of the nobility, not everybody will agree that the class was totally dependent on the Crown, at least a few preferring to stick with Montesquieu's famous notion that *noblesse and monarchie* are interdependent. The verdict on some of Catherine's domestic policies, on serfdom, for example, might be too generous; it is unlikely that her peasants would remember the right to own land as a "monarchy" had been turned into a monarchy, was not obeyed through honour, not through fear. On the other hand, it is somewhat niggardly perhaps to evaluate her foreign policy as "brash and brutal"; could she have allowed Prussia and Austria to carve up Poland among themselves?

But this would have been a duller work if its author had not given some explicit assessment as well as assembled a vast amount of information, and let there be no misunderstanding about its overall value. It is a splendid book fit for an Empress.

Paul Duker

Paul Duker is reader in history at the University of Aberdeen.

F. S. Northedge

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The making of foreign policy decisions

The Realities behind Diplomacy: background influences on British external policy 1865-1980 by Paul Kennedy
Allen & Unwin and Fontana, £12.00 and £3.50
ISBN 0 04 902005 6 and 00 634681 2

Dr Kennedy calls his book on British foreign policy since the 1860s an "experiment" in meaning by this that it is not so much a narrative account in the style of traditional diplomatic history, as an analysis of the "background forces behind the policy". It gives the history, but not in detail. The "background forces" include economic conditions, public opinion, the press and pressure groups, party conflict, the structure of government and the civil service, the armed forces, and, coming from abroad, the impact of other states and governments and international organizations, such as the League of Nations, though not, for some reason, the United Nations.

The book is divided into four parts: "The Diplomacy of Imperialism, 1865-1914"; "The War and its Impact"; "The Politics of Appeasement, 1919-39"; and "Defence and Decline, 1939-80".

Each part is in two sections, one of which deals with "structures and attitudes", that is, the various internal and external pressures affecting British policy-makers during the relevant period, the other with "debates and policies", or the actual course of foreign policy, with some reference, though not as much as the title of the section suggests, to the argument about the different options available. Dr Kennedy seems more at home with the pre-1914 period, distance perhaps lending enchantment. The fourth part, not much more than half the length of the first, is tightly condensed; it includes some odd statements, such as a reference to Harold Macmillan as having succeeded Eden in 1957 because "he had seemed firmer over Suez". Eden was devastatingly "firm".

The book is described on the jacket as a "highly original analysis", though there is nothing much original about relating the wide-ranging foreign and domestic pressures to subject. Any satisfactory foreign-policy study should do so, and most recent books on British policy in the last hundred years do. What is original about Dr Kennedy's method is that he reviews seriatim the "background influences" for a particular

period first, and then describes the course of policy in that period in the ordinary way. This has the merit of causing the various influences to backdrop to events, as they must have done in the policy-makers' minds. But it has the drawback that they do so as general influences, and tend to be separated from particular decisions and crises. The agonizing Britain's entry into the European Community in January 1973 is rather lost to sight, as is that over the abandonment of the East-of-Suez policy which preceded it.

Dr Kennedy knows his material inside out, however, and he marshals his narrative with skill, never losing sight, yet never obscuring the many-sidedness of the issues facing Britain during its long recession. Some traditional historians may quibble over what seems under-use of the Public Record Office, especially for the years since 1914. Socialists may ask for more about class conflict: the Labour Movement's ambivalence towards the Soviet Union probably had a bigger effect than Dr Kennedy (no doubt for reasons of space) allows for. But the economic forces behind Britain's descent from power are admirably

and clearly explained. Questions are posed by this book about the relative importance of these "background forces" which might have received more discussion. The book jacket carries an amusing cartoon of three men, a general, a businessman and a manual worker, dangle a Foreign Secretary (or head of the Foreign Office) on strings, like a puppet. Foreign puppet-players are not in evidence. But is it not the other way round? Dr Kennedy, on the whole, gives no clear examples of how any of the policy-makers, certainly not military men, as distinct from military considerations, however, as the external situation, War, was of dominating importance. Perhaps this is why Britain, for all its failures, did better in foreign policy, especially after 1945, than in domestic affairs, like economic policy. Foreign policy was always relatively immune against domestic pressures: economic policy was always a prey to them.

BOOKS

Genesis of modern man

Missing Links: the hunt for earliest man by John Reader
Collins, £9.95
ISBN 0 00 216091 9

The Making of Mankind by Richard E. Leakey
Michael Joseph, £9.95
ISBN 0 7181 1931 2

Since the Darwinian revolution of the mid-nineteenth century we have seen the accumulation of a body of fossil evidence for our own evolution over the past four million years. This evidence forms a continuous series from a small-brained, and in many respects ape-like, ancestor to the human beings of the present day.

Two new books deal with this fossil evidence for human evolution, but do so from different points of view. John Reader (a photojournalist) approaches human evolution through the historical development of our knowledge of the fossil record. His lavishly illustrated book traces how, over the past 100 years, our ideas about evolution have changed as new fossils were discovered and incorporated into existing ideas of human evolution. By contrast, palaeoanthropologist Richard Leakey presents a broader picture of our origins. His book, the companion volume for the current BBC television series of the same title, offers a comprehensive picture of our current knowledge of human evolution.

The two books also emphasize different aspects of our own evolution. Reader deals primarily with our biological evolution, two-thirds of the book dealing specifically with the African fossil evidence in the time period before one million years ago. This early fossil evidence for human evolution began to come to light with the discovery in 1924 of the first *Australopithecus africanus*, the Taung child from South Africa. Since that time the work of Raymond Dart, Robert Broom and Philip Tobias in South Africa and of Louis, Mary and Richard Leakey, Donald Johanson and other less well-known anthropologists in East Africa has extended our knowledge of the early phases of human evolution. This work sheds light on the period shortly after the development of bipedal walking in man, and the slightly later period when the human brain was beginning to expand and tools and other evidence for cultural activity began to appear. Those chapters in *Missing Links* dealing with the later phases of the evolutionary record emphasize the early work on that development of *Homo erectus*, of



Richard Leakey examining rock specimens.

Neanderthal Man and of anatomically modern *Homo sapiens* but largely fail to discuss the recent developments in these areas.

Although the book fails to present a comprehensive picture of human evolution from the point of view of the history of the field, it succeeds in presenting an absorbing discussion of the major fossil discoveries that have changed our thinking in relation to our own evolution. Reader emphasizes the African evidence because it has dominated the field in the past 20 years by confronting us with the most startling discoveries of recent times.

On the other hand, of the 14 chapters in Leakey's book only three deal with the early phases of human evolution. The majority of the remainder of the book deals with the later phases of our development and particularly with the emergence of our own species and of modern human life. Although the book gives a summary picture of the entire course of human evolution over the past 15 million years, its emphasis is primarily on the lessons that can be learnt from the evolution of our own species.

A particular emphasis of the later phases of the book is the topic of human aggression and the argument over whether or not aggression is an innate human trait. Leakey argues that aggression in human society is a relatively recent development and is of a markedly different nature from that of aggression in non-human animals. He

thesis that is found throughout the book, a thesis that is supported by recent archaeological and palaeontological work. At the site of Laetoli in Tanzania Mary Leakey has recently brought to light conclusive evidence that our ancestors of at least 3.75 million years ago were walking in a bipedal fashion. It has also been shown that *Homo erectus* of perhaps 200,000 to 400,000 years ago was developing the seeds of a religious sense and that of a rudimentary knowledge of astronomy and the seasons were developed as far back as the time of Cro Magnon man during the last ice age.

Leakey also discusses the evolution of human intelligence and language in this context. He emphasizes that, although our early australopithecine ancestors of three million years ago had much smaller brains than our own, they had brains of the same form as ours. There is even the indication in these early fossils that one of the areas of the brain associated with language, Broca's area, was being developed. Whether or not this indicates that these early ancestors could speak is an open question, but it is clear from the evidence that despite their size the brains of these fossils were more human-like than ape-like in form.

Leakey also draws on the archaeological record for the development of human behaviour. He argues that the evidence for order and rules of behaviour recorded not only in the increasingly complex tools of our ancestors but also in their activity patterns suggests that the roots of intelligence were a very early characteristic of the human line.

The Making of Mankind offers the general reader an excellent introduction to the science of human evolution and to some of the controversial conclusions that can now be drawn from the fossil record. It also presents these conclusions in a way that is relevant to our image of ourselves as human beings in a changing world. However, although *Missing Links* has a narrower focus, Reader does provide a more in-depth discussion of the field and one that would have appeal not only to the general reader but also to the specialist in search of an absorbing discussion of the circumstances surrounding, as well as the impact of, the major fossil discoveries that have provided the basis of our knowledge of our own origins.

Leslie Aiello

Leslie Aiello is lecturer in physical anthropology at University College London.

Eliminating real numbers from physics

Science Without Numbers by Harry H. Field
Blackwell, £7.95
ISBN 0 631 12672 4

The structure of this book may be compared to that of the planet Jupiter: a solid inner core surrounded by an envelope of gas.

The inner core (chapters five to eight) contains the outline of a method for eliminating real numbers from physics. Field observes that the introduction of real numbers into a physical theory (as temperatures, for example) always adds an element of arbitrariness. His idea is to purge physics of real numbers by developing what he calls "intrinsic" theories, presented in the manner of Hilbert's axiomatic treatment of Euclidean space, instead of the usual "extrinsic" ones, which resemble more the treatment of space as the triple Cartesian product of the real numbers.

His presentation is ingenious and mathematically sophisticated, but somewhat sketchy: it would be particularly useful to see how he would handle special relativity using his methods. In any event, the theory makes perfectly good sense on its own. Unfortunately, however, Field has chosen to embed this interesting, and possibly important, theory of physics in

what I'm afraid I can only describe as an absurd theory of the foundations of mathematics.

Field's theory, which he calls "nominalism", has this as its leading principle: not to postulate abstract entities. Properly understood, this is unexceptionable, and indeed, might even be taken as the leading principle of the currently accepted theory, which Field attacks as "Platonism". Everything turns upon what is meant by the expression "abstract entity". Field does not venture a definition, but gives us a list: numbers, sets, functions - these (and "similar entities") are, according to him, the abstract objects of mathematics.

This is a heterogeneous list. And it is clear that Field is using the term "abstract" in a vague and imprecise sense. (Indeed, I suspect that by "abstract" he means simply "non-physical".) But it would be most impolitic of him to admit as much. What, after all, are physical objects? On Field's own account they can be entities with an extremely dubious claim to reality; he includes (page 31) uncountably many "space-time points" among physical objects! In fact, the word "abstract" has a quite definite meaning which is determined by its etymology: it comes from the Latin *abstractus*, which is the past

participle of *abstrahere*, to draw or lift out. Thus we may abstract a feature or property from an object by lifting it out, so to speak, and considering it on its own. In this way, perhaps, we may even obtain an abstract object (a shape, or a colour, for instance).

To be sure, there are formidable philosophical difficulties with this notion. Still, it is not difficult to see how one might come to regard at least the objects of traditional (pre-1870) mathematics - real numbers and geometrical figures, for example - as abstract objects. However, it is obvious that sets and functions are not abstract in this sense. What could they be abstracted from? Moreover, we can, and do, get rid of the old-fashioned abstract mathematical objects by using the axiomatic method: a particular traditional system (the real numbers, for instance), whose elements are taken to be abstract objects, is replaced by an axiomatically defined, infinite class of mutually isomorphic structures (complete ordered fields) whose elements can be anything whatsoever.

However, although you can get rid of real numbers in this way, you cannot eliminate sets and functions axiomatically, for the latter are essential to the whole enterprise of axiomatic defini-

Magnetic modes

Electromagnetic Radiation by F. H. Read
Wiley, £19.50 and £7.95
ISBN 0 471 27718 5 and 27714 2

Electromagnetic Radiation, as a title for a course or a book, is very broad indeed, providing ample scope for selection of favoured topics and suppression of others. At Sussex, where the subject of electromagnetic waves is presented in the second year, the syllabus has changed markedly depending on which lecturer has been in the hot seat. For Dr Read who claims to have based his material on a course of lectures attended by third-year undergraduate students together with a few first-year postgraduate students, I can imagine an even more difficult problem of selection: the interrelation of waves and matter would seem a mutual inclusion for the final year, but what about the more conventional coverage of "optics"?

A survey of the contents gives some idea as to the thrust of the text. After a brief introductory chapter, in which I particularly appreciated the six-page historical background to light waves and photons, chapters two to nine cover Maxwell's equations and electromagnetic waves, a classical treatment of generation and interaction, quantum ideas, coherence, lasers, laser light, scattering and absorption, and detection. There are also three substantial appendices, a chapter-by-chapter bibliography for additional reading, and answers to 44 of the 61 problems. Although intended to relate to a 4th-lecture course, optional choices could be made for shorter courses.

Within the author's chosen limits, this is a very good book which deserves success. There are, however, two features which may make it a little vulnerable in the market place. The first involves the question of how much time an undergraduate can reasonably be expected to devote to electromagnetism and electromagnetic waves. The journey from Advanced Level physics to the electromagnetic wave equation and a few of its solutions (say, up to the end of chapter one in this book) takes 20 or 30 lectures. In addition, a physics graduate should surely know something of interference, diffraction, waveguides and antennae, but the book assumes that this has been learnt elsewhere (in chapter five we are told that "the reader who is familiar with diffraction theory will recognize these numbers as those giving the zeros in the Fraunhofer diffraction pattern of a circular hole"). In a similar vein, in discussing laser modes in chapter six we learn that "the modes in which we are interested are those in which the electric and magnetic fields are transverse to the axis of the cavity and that these are called TEM modes". Further information about cavity modes or, for that matter, waveguides, has to be sought elsewhere. My criticism probably reflects my own bias: is the laser and radiation-and-matter material (so excellently presented in this book) intended to be instead of old-fashioned physical optics or to be optionally extra? I think the author intends the latter.

My second criticism concerns the fact that, although some sections are very elegantly argued (for example, the earlier parts of chapter five on coherence), there are a number of occasions when the "it-can-be-shown-that" weapon is clumsily used. For example, the discussion on radiation from an accelerating charge is badly muddled, and even the Poynting vector is a little nervously introduced in chapter two.

As a new addition to the admirable Manchester Physics Series, this book shares with its companion volumes a reasonable price coupled with good production standards. Dr Read's textbook is thus very suitable for a third-year advanced option but I would not recommend it as a mainline course text on electromagnetic waves.

D. S. Betts

John Mayberry is lecturer in mathematics at the University of Bristol.

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COMPUTERS IN HIGHER EDUCATION

How teacher and machine can complement each other

It is now ten years since the Department of Education and Science announced its first National Development Programme in Computer Assisted Learning. From 1972 to 1977 almost £3m was used to establish approximately 20 large projects, mainly in universities and polytechnics. These studies were set in science and in social science but covered a variety of subject areas.

There have since been significant developments in computer technology so that microcomputers and graphics facilities are now within the budgets of individual departments, colleges and schools. This has stimulated new and wider interests in the use of computers for teaching and learning, particularly as the Government has now introduced its Microelectronics Education Programme. So it is appropriate to reflect on achievements in Computer Assisted Learning to consider some difficulties which experience has exposed, and to speculate on what is needed if CAL is to avoid becoming the latest disappointing expensive educational innovation.

The computer holds considerable promise as a teaching machine. It can calculate and undertake logical operations quickly.

If concepts or variables and the relations between them are specified, the user can set input values with a view to testing his ideas about the underlying model. He can see the results output at the terminal, and visual display units and graphics facilities allow them to be attractively displayed. By using such simulation programs, the teacher can broaden his objectives and provide illustrations not possible by other means. Also, students are stimulated to develop their own ideas and decision-making skills.

A range of such programs is now available and is being used in day-to-day teaching, for example in engineering (Queen Mary College, London), physics (Surrey), medicine (Glasgow, Leeds, and Imperial College), and business studies (Buckingham College and the London Business School).

An emergency patient simulation program illustrates many of the features which justify simulation as a teaching device. A car accident provides the context; the user at the terminal has to investigate the victim's condition and propose appropriate treatments. The feedback shows the effects these actions have on the patient's blood pressure, pulse, respiration, and other vital signs. This information is given in graphical or in tabular form. The exercise runs against the clock with realistic time deductions being applied by the program for the chosen tests and treatments. In this way the student is encouraged to be decisive, to undertake several concurrent treatments, and must learn to evaluate their effects. He sees the consequences of his decisions, can try again, and can work through several cases in a relatively short time.

A second advantage of using the computer in teaching arises from its large store.

For example, programs have been written to manage information-retrieval systems acting on question banks, and on data-bases in the social sciences. These are useful as a resource both for the teacher and for the student. Also, author languages permit the development of tutorial programs, where the computer not only stores and presents teaching texts, but evaluates student responses and provides feedback. Decision rules allow the sequence and type of instruction to adjust to the strengths and weaknesses of the individual learner. These characteristics are especially useful when there are significant differences in the experience of students and where the teacher is faced with large classes, perhaps in service-teaching. Programs have been developed at Glasgow; in chemistry, biology and applied statistics at Leeds and the Open University; and in language learning at the University of Hull.

These NDCAL-supported projects developed from an analysis of the teaching/learning situation, perhaps

where conventional methods were limited or were not doing well. A diversity of types of learning programs resulted - adaptive tutoring, learner-control systems, simulation packages, modelling through programming languages, educational data-bases, problem-solving/decision-making programs and computer-managed instructional schemes. Typically, large-scale applications use several of these approaches. For example, in teaching the design of experiments in applied statistics or in chemistry, there may be tutorial revision of the theoretical concepts used, decision-making programs on the experimental design, some simulation of data to supplement that actually gathered, and some interactive processing of the results.

Overall these applications require a variety of computer languages and teaching systems; however, this can aggravate the problems of transferring materials between institutions.

If it will be noted that the strengths of computer-based programs complement those of the human teacher, we cannot calculate as quickly, or recall such large amounts of data; neither can he give individual attention when faced with large classes of students. On the other hand, the teacher is good at discussion, flexible in the direction given to classes, and perceptive in developing students' work. This ease of communication and intelligence contrasts sharply with the rigid conventions which have to be followed in the interaction between CAL programs and their users. In simulation packages the student has to call named variables and set permitted values; in tutorial programs, where material is pre-stored, the questions and tasks have to be constrained so that the author can anticipate likely responses and errors.

So the aim should be to develop a program-teacher constructional system; but designing these systems isn't easy. Teachers have their own views on how their subject should be taught, and programs need to be capable of adapting to these particular circumstances.

At present, many application programs are offered on a take-it-or-leave-it basis. The teacher is unable to alter content or decision-rules, or run simulation packages in different ways with alternative formats, feedback or models. Further, CAL is at its best when it is stimulating the learner to use his own knowledge and develop his own ideas. It encourages diversity, whereas the teacher when faced with a large class has to restrict the variety of ways in which students learn.

At present, there are programs available which may suit many departments and colleges. Information about them is not easy to come by, and preparing the materials for transfer to other computing systems requires administrative effort. Often academic staff cannot give sufficient time to these activities and cannot meet the requests that are made. The CEDAR project at Imperial College and the Council for Educational Technology provide what data they can, but there is no recognized mechanism for the dissemination of experience and materials. This situation contrasts sharply with the approach of the Microelectronics Secondary Education Programme where a first objective has been the setting up of a network of regional information centres.

Any development programme needs related research to provide stimulation and direction. The quality of CAL materials is crucial and it is important to sort out effective designs which take advantage of an improving technology. Microcomputers, which can be connected to larger machines, and graphics terminals allow programs to move beyond the processing of numbers and texts to image processing. How this capability should be utilized in learning is relatively unexplored.

At Leeds and at other institutions, teaching systems are now being designed which within a common program style allow the teacher to insert his own content, presentation instructions and decision rules. Examples include, decision-making programs (medical patient-management) and

tutorial systems where control programs can be specified easily by lecturers. These allow the choice and sequencing of small pre-written teaching modules and the insertion of individual connecting comments, teaching material and decision rules.

Further, stimulated by work in artificial intelligence, there is increasing interest in trying to design more knowledgeable teaching programs. These programs are themselves capable of medical diagnosis - in general ways, and of giving an explanation of the working. They endeavour to represent the learner's performance as programs which can replicate his pattern of working. So these programs are far more flexible in the help and evaluation comments they give.

At present these materials can be implemented only for well-structured subject matter such as algebra, mechanics, electronic fault-finding, medical diagnosis. But in these areas they can answer a wider range of questions.

WHY DO? HOW DO? WHY WRONG? WHAT NOW? They can accommodate differences in the working methods of students and so can be used in problem-solving situations.

CAL has a growing and significant potential for those working in higher education. Whether this will be realized depends upon a co-ordination of effort, and upon the transfer of materials and experience - because it is expensive technology.

J. R. Hartley

The author is director of the Computer Based Learning Unit at The University of Leeds.

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Choosing appropriate tools for the professional tasks in hand

The colleges of further and higher education provide a richly varied pattern of courses deriving from their different origins and histories and also from their individual responses to local needs and pressures.

Understandably, the development of computer education has likewise followed many different paths in colleges, presenting an equally varied picture of involvement in computing.

For example, there are several HE colleges with many years' experience of providing courses in computing supported by a college computer unit with computing facilities and supporting staff, while at the other extreme, in some ways, there are other HE colleges which have only recently become involved with computers - often microcomputers departmentally based with little or no supporting staff.

This difference may be merely a reflection upon the institution's origin as a college of technology or a college of education, and is by no means a disadvantage when considering the future. But it does make the task of describing the present state and development of computing in the colleges that much more difficult.

In identifying the mainframe and micro approach to computer provision, it is worthwhile to shout down what I see as a distracting misconception on the part of those who have recently come to consider the impact of computers on the teaching of their own subject. I do not accept that there is any difference in principle between so-called mainframe, mini and micro computers. What is important is that colleges use those computing facilities that are most appropriate to their professional task as educational institutions. If it is felt that it is important to provide "hands-on" experience for the maximum number of students then this essential need can be met by individual micros or terminals linked to a time-sharing system. Indeed, the day is not far away when the distinctions will be negligible as we move towards a network of intelligent work-stations sharing the use of more expensive and specialist devices.

Undoubtedly, one major factor in computing education at the present time is that the use and application of all forms of computing are impacting much more widely throughout further and higher education than was ever the case in the past, though this is only reflecting the growing penetration of many computers throughout society as a whole - particularly in industry and commerce, but increasingly in leisure activities too.

It is in this latter area that the forthcoming BBC Computer Literacy Project will have a major impact, and many colleges will be offering support for this both in the form of conventional courses and also for various forms of self-study based on 30 Hour Basic to be published by the National Extension College.

Not only is the interest in computing spreading throughout colleges, there is now much more variety in the way in which computers are being used in further and higher education as is true at most levels of education. Originally the majority of computers in colleges were installed to satisfy the needs of various courses in computing such as the BINCIND in computer studies, now being replaced by the new BEC/TEC higher certificate and diploma courses. It is in supporting courses such as these that many of the established college computer units came about.

Increasingly, many other courses in engineering, sciences, business and management studies have been revised to include modules on computers and their application.

Again, bodies like BEC and TEC can be seen to have had considerable influence on this development and this is now evolving through a further stage with the issue of the BEC document, *Notes of Guidance to Centres on the Implications of Developments in Microtechnology for the teaching of Courses leading to BEC General, BEC National and BEC Higher National Awards*. The major philosophy seems to be the conclusion that the impact of microtechnology on both the business world and education will be so great that the implications cannot be covered by offering suitable computer studies or data processing options alone but that a course, in all its components and as a whole, must embrace and integrate the role and use of computers. It is likely that other courses will also move in this direction. This has considerable

implications for computer resources in colleges particularly in the development and use of software.

A third way in which computers have been used in education is through computer-assisted learning. Traditional CAL packages are frequently based on the simulation of a real activity and designed for individual students. An menu, time-tabling and resource scheduling though it is important that such foreign languages department has for several years been using our computer centre to support the teaching of varied groups of students in French, German

Is 'hands-on' experience for maximum numbers important... or will it be used as an electronic blackboard?

and Spanish.

In contrast to the student mode of operation with its severe resource implications is the use of demonstration mode or computer-assisted teaching. In this case it is essentially the lecturer who is using the computer as a form of electronic blackboard to improve the effectiveness of his own teaching. I can certainly vouch for this, though the experience is a somewhat heady one. This approach is much more economic in its use of resources and would seem to have wider application as a general teaching aid as well as in the more specific areas of simulation and modelling referred to before. Again, developing the application of computers in education in this way is very dependent upon the availability of suitable software together with appropriate in-service training.

A further use of computers, one which has been something of a Cinderella activity, is in computer-supported teaching where computers have considerable potential in many aspects of course management and teaching. Particularly important is the role of text and word processing in handling much of the information processing involved such as student handouts, worksheets, assessments and exams.

I believe that the more we as educators can accept and integrate the use of computers within education then the better and more effective we will be in teaching our students to appreciate and appraise the role of computers within their own work activities.

Finally, to complete the picture on the use of computers, we should not totally ignore the fact that many colleges have used computers to a greater or lesser extent in general administrative applications such as student enrolment, time-tabling and resource scheduling though it is important that such activities are undertaken only when the computing resources are clearly available. Despite the difficulties involved there appears to be growing interest by colleges in this area.

The use of computers and the implications arising are a major issue for society today and colleges have an important role to play in educating society to adapt to the changes that will result, both at work and at home. However, the colleges themselves have their own problems related broadly to resources. The major resource of any college is its academic staff who on the whole have no greater insight into the use and application of computers than the rest of society. Indeed, it is the more established and experienced staff in many subject areas who are likely themselves to be most resistant to change.

A major programme of in-service training must surely be as essential for further and higher education as it is for schools where the government funded MBE project has identified in-service training as a major priority. At present, there is no similar programme for further and higher education and each college must therefore face the responsibility for in-service training itself. In

my own area we are organizing from September a programme of six introductory courses for FE and HE lecturers as a positive attempt to tackle this problem.

Equally important to staff development is the availability of appropriate software packages for educational use. The growing emphasis on computer applications in a wide variety of subject areas, such as BEC and TEC courses, demands robust, flexible and well documented software. The use of commercial packages for commercial applications is not in itself a complete answer as a package that is effective for a particular application may not be effective in teaching students the principles of that same application.

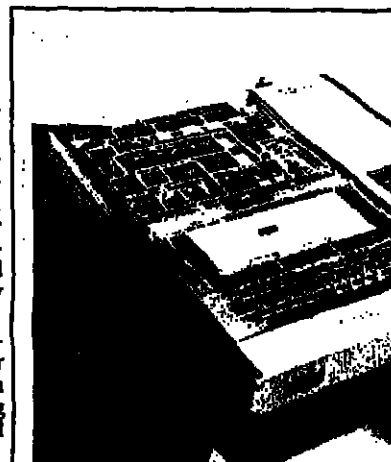
Many colleges are limited in the amount of software development they can undertake and all too often duplicate efforts elsewhere. On the other hand there are at present no really effective schemes for organizing and developing software on a national scale. Software schemes, such as CHESSE, operated by the Association for Computer Units in Colleges of Higher Education, have been unable to maintain development through lack of funding. Software costs money as well as time and effort and until the problems of funding and organization are tackled properly, software development, the key to effective computer education, will remain too fragmented, too dependent upon the efforts of individuals, and too often achieving only moderate success.

As for hardware, colleges will never have sufficient, but the need for it is much more readily understood than the need for expert support within colleges, the need for the right kind of software and the need for staff development.

If colleges are going to respond to the expanding demand for computing and computer based courses, then they must take the difficult and uncomfortable decisions which will be required to make the necessary resources available. Each college will have to face up to this and decide its own future.

Mike Williams

The author is director of the computer centre at Luton College of Higher Education and a member of the ACUCHE executive committee.



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COMPUTERS IN HIGHER EDUCATION

Crossroads in view for university administrations

The rapid advances in computing equipment following the advent of the silicon chip, and a corresponding fall in cost, have opened up a new horizon for university administrative computing. Facilities which hitherto could only be afforded by such organizations as the clearing banks and airline companies have now dropped in price so dramatically that universities are able to consider them for administrative purposes.

When computers were first introduced they were relatively expensive and unfriendly. Business organizations had little alternative to installing centralized systems, whatever the ethos of the organization. The picture to-day is very different. The costs are no longer clearly in favour of the large central computer, more experienced computer users are not prepared to accept priority conflicts and on-line systems are no technical novelty. Pressures from users are forcing a greater distribution of processing power to the location of the problems. This is often referred to as "distributed processing" and can be defined as putting computer power where the people and problems are. It is achieved by greater use of computer terminals (VDUs) at the workplace and is the merging pattern

in UK universities.

Before the use of terminals with a computer became more generally available, university administrations were limited to running batch work (often on the central mainframe computer); data was processed in large batches at regular times of the week—not transaction-by-transaction as is possible in a manual system. Such systems could produce far more information than manual methods but they were not particularly responsive. They could provide data at fixed intervals, in the form of reports, but they could not answer enquiries raised between report cycles. With terminal-based systems it became possible for the first time to make an enquiry from a terminal about, say, a student's academic record and to obtain an immediate answer. This was a step in the right direction, provided always that the requirement for the enquiry had been foreseen either by the computer manufacturer (in the form of a pre-developed system) or by the user's computer department (in the form of an appropriate computer program). But this did not solve the problem of the completely new enquiry. The necessary data was held in the computer but it could not be accessed or

manipulated without some form of computer expertise and, even if this was available, there would most likely be an unacceptable delay while the program was written. The problem was finally overcome by the interactive terminal system which enabled terminal users without computer experience to not only define and carry out their own enquiries but also to define and print reports. This facility greatly increased the scope for the administration to make effective use of the computer and the information it stores, and it does reduce management dependence on computer professionals.

Other advantages are that access to the computer and its files is possible only from terminals sited within the administrative departments, and the administration has total control over setting processing deadlines.

When considering on-line systems, as opposed to batch processing, it is of interest to note recent cost trends and forecasts for the next five years:

Cost of data input (batch) Double	
Hardware Half	
Cost of operations staff Double	
Accommodation Double	
Hardware maintenance (relative to hardware costs) Double	
Consumables Double	

Given these cost trends, we can see that the pressure will be to increase the amount of hardware in use if it means the other components can be reduced. When considering the various computing alternatives, the trend is strongly for local stand-alone computers where several terminals need to access one file. Such local machines can be run by part-time operators, accommodation requirements are marginal (unlike the central mainframe where they are very real) and even the use of consumables is reduced.

A number of universities have reached, or are about to reach, the crossroads where they must decide their future pattern of administrative computing. The need to make a decision is often brought about by a change of the computing unit's mainframe machine, which the administration has used hitherto. What are the alternatives for the administration to consider? A return to manual methods would be possible, although it would be extremely difficult to estimate the cost. Throughout the last decade most administrative computing has been done on a computerized processing and in this gone a significant increase in size. It is difficult to imagine how a university of say, 6,000 students and 2,500 members of staff would ever cope with a manual system. The UCCA student admissions and university statistical record (USR) systems are computerized, which leaves universities with little choice but to have a computerized student record system, and a manual payroll of such size would be difficult to administer. It would need a significant number of clerks to be recruited and,

as stated in the previous paragraph, while hardware (machine) costs have dropped, staffing costs have continued to escalate. It is feasible that the administration's computer applications could be transferred to a commercial computer bureau but, for some applications, this solution would not be very practicable and the cost could prove to be excessive. The third alternative might be to transfer the work to the new computing unit mainframe.

However, it is a matter for debate whether universities will continue to replace one mainframe with another. Some may find it preferable to distribute processing over a number of linked small computers. Clearly, the commitment to data processing for the administration should not influence this essential academic decision. There are a number of reasons why it may be thought that administrative computing should be run independently of that of the computing unit. The needs of administrative data processing can impose severe constraints on the selection of the computing unit's machine and it is likely that both the computer board and academic users of the unit would find such constraints intolerable. The timing of the switch to a new computing unit machine will always be critical for the administration. With many current programs an early decision will of necessity be required regarding the new machine and its suitability for administrative use. Finally, the last solution could be to transfer the work to an administrative computer. Some universities already have small computers for the sole use of their administrations. At the present time these are mainly batch oriented but recently more sophisticated computers, better able to cope with both on-line and batch working, have been installed. These machines can be classified as business mini-computers and it is believed that use of this type of machine will be the growing trend.

What do universities who contemplate acquiring such a machine generally look for? The hardware specification will be fairly conventional, although a basic consideration will be easy and inexpensive expansion capabilities. The machine must have the ability to support up to twenty interactive terminals and to work in an office environment with minimal air-conditioning. A simple enquiry language for non-programmers is desirable, as is the ability to take a hard copy print of the content of some terminal screen displays. COBOL is the programming language used by the majority of universities and a suitable compiler will thus be necessary. It is essential, in the case of a university administration, that the manufacturer can provide an efficient database management system. This is a software facility, which will form part of the operating system. The definition of a database management system (DBMS) is that it is a collection of data which is shared by many different applications. ADBMS defines the way the data is held and provides,

programmes to allow:

- data sharing,
- data integrity,
- security of data,
- transparency of organization to application programmes.

In university terms, applications are said to revolve around three basic elements of administration: the financial, staff and student records, and even these are inter-connected. The administration is ideally suited to the DBMS method of processing. For example, instead of the student's name and number being recorded on each relevant file, it will appear once followed by his/her academic record, financial record, accommodation record, and so on. This provides a consistency of information and is an efficient in terms of operation. For example, where the forms which have been used previously in the systems can be displayed on the screen, another software feature will be desirable.

A recent development in the use of England has been the facility, universities to procure interactive computers, of the type discussed, at a large discount from terms under the of the Southern Universities Purchasing Consortium. This facility is restricted to hardware and software; initial software has been purchased; one university, others can use a "copy" contract which results in significant cost savings. This means that now we are treated in the same way as a group of companies in which has a corporate computing policy. A further outcome which has been that universities will enter the systems and programs to write thereby reducing the cost development costs.

In conclusion, it is believed that these days of financial stringency at university will be seeking to low cost-effective and efficient administration. Proper use of the latest computing techniques will help achieve this. Distributed processing will bring computer power into the workplace, it ensures that the computer becomes an integral part of the workflow. However, this harnessing of power of the computer is not without its dangers and system designers must pay particular attention to reliability of the system and the security and control of data.

Malcolm Barnes
The author is a consultant with Southern Universities Organisation and Methods Unit.

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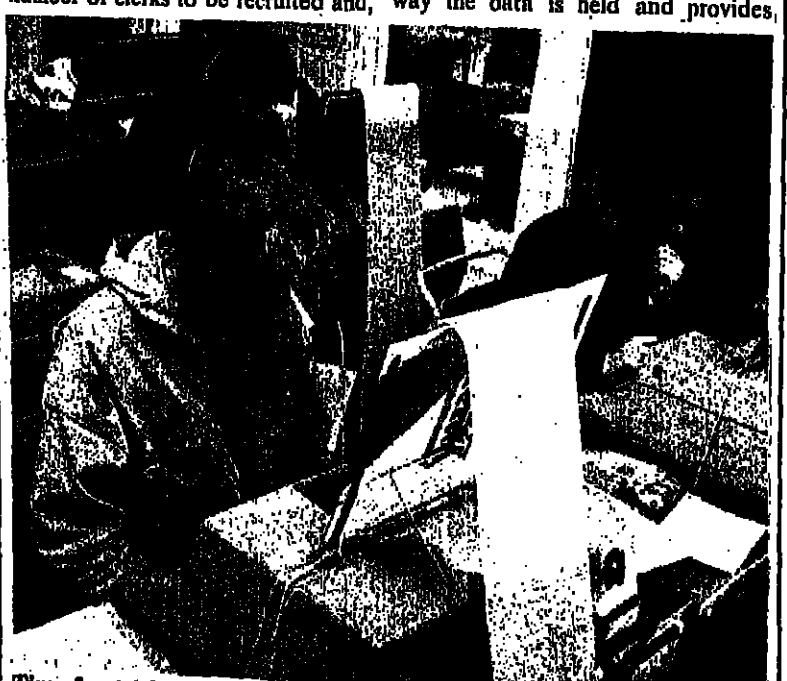
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Universities

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SENIOR STAFF VACANCIES

Applications are invited from suitably qualified candidates for the following vacant posts in the Faculties of Science, Education, Social and Management Sciences and Bursary Department

(A) FACULTY OF SCIENCE

(i) Department of Chemistry
Post: Senior Lecturer

Applicants with experience in any branch of Chemistry will be considered but special consideration will be given to the areas of:

- (i) Polymer Chemistry
- (ii) Colour Chemistry
- (iii) Physical Chemistry
- (iv) Theoretical Chemistry
- (v) Analytical Chemistry
- (vi) Environmental Chemistry

(ii) Chief Technologist
Principal Technologist

Applicants for (i) above should be experienced in:

- (i) running a teaching and research Laboratory
- (ii) handling a glass-blowing service.

2. Department of Mathematics
Post: Senior Lecturer

Applicants with interest in any branch of Mathematics will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

3. Department of Physics
Post: Senior Lecturer

Applicants with interest in any branch of Physics will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

4. Department of Biology
Post: Senior Lecturer

Applicants with interest in any branch of Biology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

5. Department of Education
Post: Senior Lecturer

Applicants with experience in any branch of Education will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

6. Department of Social and Management Sciences
Post: Senior Lecturer

Applicants with experience in any branch of Social and Management Sciences will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

7. Department of Bursary
Post: Senior Lecturer

Applicants with experience in any branch of Bursary will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

8. Department of Library Science
Post: Senior Lecturer

Applicants with experience in any branch of Library Science will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

9. Department of Art
Post: Senior Lecturer

Applicants with experience in any branch of Art will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

10. Department of Music
Post: Senior Lecturer

Applicants with experience in any branch of Music will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

11. Department of Physical Education
Post: Senior Lecturer

Applicants with experience in any branch of Physical Education will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

12. Department of Health, Physical Education and Sports
Post: Senior Lecturer

Applicants with experience in any branch of Health, Physical Education and Sports will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

13. Department of Agriculture
Post: Senior Lecturer

Applicants with experience in any branch of Agriculture will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

14. Department of Forestry
Post: Senior Lecturer

Applicants with experience in any branch of Forestry will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

15. Department of Fisheries
Post: Senior Lecturer

Applicants with experience in any branch of Fisheries will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

16. Department of Aquaculture
Post: Senior Lecturer

Applicants with experience in any branch of Aquaculture will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

17. Department of Botany
Post: Senior Lecturer

Applicants with experience in any branch of Botany will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

18. Department of Zoology
Post: Senior Lecturer

Applicants with experience in any branch of Zoology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

19. Department of Entomology
Post: Senior Lecturer

Applicants with experience in any branch of Entomology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

20. Department of Microbiology
Post: Senior Lecturer

Applicants with experience in any branch of Microbiology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

21. Department of Immunology
Post: Senior Lecturer

Applicants with experience in any branch of Immunology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

22. Department of Pathology
Post: Senior Lecturer

Applicants with experience in any branch of Pathology will be considered. Special consideration will be given to those prepared to teach a wide variety of topics.

(B) BUSINESS ADMINISTRATION:

1. Principle of Management

2. Personnel Management and Industrial Relations

3. Production Management

4. Organizational Behaviour

5. International and Small Business Management

6. Public Administration

7. Quantitative Analysis

(C) BURSARY DEPARTMENT

Post: Principal Accountant

Senior Accountant

Qualifications:

Professor/Reader

Applicants should normally have had several years' experience as a Senior Lecturer or equivalent. They should have a substantial research output evidenced by publications and a demonstrated capacity to play a major role in the development and leadership of teaching in a department together with administrative ability.

Senior Lecturer

Applicants should normally possess a doctoral degree in the relevant subjects and demonstrated experience of University teaching and research, including a substantial period of post doctoral level. In the case of applicants in Library Science Department, specialization in Archival Management, Printing and Publishing will be preferred.

Lecturer I & II

Candidates should normally hold a doctoral degree and have some years of University experience. Applicants with Masters degrees can however be considered for appointment in Faculty of Science, normally in the lower segment (Grade II) of the scale. Specialization in Documentation and Special Librarianship will be preferred in the case of applicants for posts in the Department of Library Science.

Principal Accountant

Applicants must possess ACCA, ACA or ACMA with 3 years post-qualification experience of B.Sc. (Hons) Accounting with 5 years post-qualification experience. Other qualifications of equivalent status with requisite years of experience will be considered.

Senior Accountant

Candidates must possess ACCA, ACA or ACMA with 1 year experience or B.Sc. (Hons) Account with 3 years' experience.

Chief/Principal/Senior Technologist

Candidates should hold the HND in Science Laboratory Technology or the AIST or ANST. The level of the appointment will depend on the extent of post-qualification experience obtained in Chemistry Laboratories, ranging up to about 12 years for Chief Technologist.

Salary:

Professor: £11,558 - £12,720 p.a.

Reader: £10,298 - £11,326 p.a.

Senior Lecturer: £9,024 - £9,824 p.a.

Lecturer I: £7,404 - £8,052 p.a.

Lecturer II: £5,790 - £6,732 p.a.

Principal Accountant

Appointments may be permanent or on contract. Permanent appointments are for two years. Part-time appointments are for one year. All posts are full-time. For a full list of posts, please apply to the Registrar, Bayero University, Kano.

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UNIVERSITY OF ZIMBABWE

Applications are invited for the following posts:

PROFESSOR AND HEAD OF DEPARTMENT OF ANATOMY

Applicants should hold a PhD in Anatomy and have had previous experience in the Department of Anatomy. The successful candidate will be expected to engage in clinical work and take part in research and teaching.

LECTURER SENIOR LECTURER IN ANATOMY (2 posts)

Applicants should hold a PhD in Anatomy and have had previous experience in the Department of Anatomy. The successful candidate will be expected to engage in clinical work and take part in research and teaching.

LECTURER SENIOR LECTURER IN HISTOLOGY AND CYTOLOGY

Applicants should hold a PhD in Histology and Cytology and have had previous experience

Polytechnics continued

The Polytechnic Huddersfield
Department of Geography and Geology
Senior Lecturer/Lecturer II
REF. ACA 393

Applications are invited for a Lecturer II/Senior Lecturer in Development Studies with specific reference to Agricultural Practice and Rural Life.

The successful candidate will be required to teach courses related to development studies on B.Sc. (Hons.) Geography and BA (Hons.) Humanities, and to contribute to such other courses as appropriate. An interest in the Far East will be an advantage.

Salary: SL £9,624 - £11,328 (Bar) - £12,141;
LI £9,462 - £10,431.

Further details and application forms are available from The Personnel Office, The Polytechnic, Queensgate, Huddersfield HD1 3DH (Tel: 0484 22288 Ext. 2224) and should be returned not later than 23rd June 1981.

PLYMOUTH POLYTECHNIC

Faculty of Technology
Department of Mathematics
Statistics and Computing

SENIOR LECTURER/LECTURER II IN COMPUTING

Salary:
Lecturer II : £8482-£10431
Senior Lecturer : £9264-£12141

Applicants for this post should possess a good honours degree together with appropriate research, commercial and/or industrial experience. Applications would be welcomed from candidates with specialist expertise in data base management, information retrieval or real-time transaction processing systems.

Application forms to be returned by Friday, 2nd July 1981, can be obtained with further particulars from the Personnel Office, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

MPMU The Position of General Manager has become vacant at Manchester Polytechnic. Successful candidates will be required to have a minimum of 10 years' experience in a senior managerial position in a manufacturing or commercial organisation. Applications should be sent to the Personnel Office, Manchester Polytechnic, 150-152, Piccadilly, Manchester M1 2GB. Closing date: 24th June 1981.

Colleges of Technology

LOTHIAN REGIONAL COUNCIL
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NAPIER COLLEGE OF COMMERCE & TECHNOLOGY

RESEARCH ASSISTANT
Department of Industrial Engineering

Required to undertake research in support of a College project on the structure of the manufacturing industry in Scotland. This research is in support of the College's Technology with Industrial Studies Degree Course. Applicants must hold an Honours Degree or equivalent in any relevant discipline and be able to contribute to the project in the analysis of the factors affecting productivity of the Council for National Academic Awards would be encouraged, where appropriate, for the successful applicant.

Salary on Scale: £5,298 - £6,870.

Application forms may be obtained from the Administrative Officer, (Personnel), at the College, Colinton Road, Edinburgh EH10 8DT.

DUNDEE COLLEGE OF TECHNOLOGY
DEPARTMENT OF BUSINESS STUDIES

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The person appointed will be required to undertake teaching duties up to honours degree level in the area of Employee Relations and, in particular, Industrial Relations and Personnel Management. Applicants should have suitable academic qualifications and preferably have Teaching, Research and/or Industrial experience.

Salary scales (currently under review): £5,958-£10,527 (Bar) - £11,303 with initial placement dependent upon approved previous experience. Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application forms obtainable from The Personnel Office, Dundee College of Technology, Bell Street, Dundee DD1 1HG to whom completed applications should be returned by 26th June 1981. THER5

CRAWLEY COLLEGE OF TECHNOLOGY
Principal

Group 7
Principal required in January, 1982 for Group 7 College with nine Departments. Candidates should be graduates with experience of senior responsibility in Further Education.

Form and details from Area Education Officer, Goffs Park House, Horsham Road, Crawley, West Sussex, RH10 8PB, on receipt of foolscap stamped, addressed envelope.

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DUNDEE COLLEGE OF TECHNOLOGY
Department of Mathematics and Computer Studies

SENIOR LECTURERSHIP IN COMPUTING
The person appointed will be required to undertake the development of computing as a major discipline in the College's BSc (Hons) Degree in Science. Applicants should have suitable academic qualifications, teaching, research and/or industrial experience.

LECTURERSHIP IN MATHEMATICS
The person appointed will have an active interest and research record in the applications of Mathematics. Reference will be given to candidates with an interest in Business Applications.

Salary Scales (Currently under review): Senior Lecturer (A) Scale: £10,509-£11,697 (Bar) - £13,281. Lecturer (A) Scale: £8,958-£10,527 (Bar) - £11,307. Initial placement on these scales will depend upon approved previous experience. Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application forms may be obtained from the Personnel Office, Dundee College of Technology, Bell Street, Dundee DD1 1HG to whom applications should be lodged not later than 26th June 1981. THER6

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Applications are invited for this post which becomes vacant on 1 January 1982. The College is placed in Group 7 and the salary will be £20,154 p.a.

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ELECTRICAL ENGINEERING DEPARTMENT

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(£9,094 to £12,141 subject to 10% increase) (one vacancy)

and

LECTURER I
(£5,054 to £8,658) (one vacancy)

Applicants must have graduate qualifications and experience in industry or research appropriate to one or more of the following activities:

Communications - in addition to a specialist knowledge within this field a wide interest in information engineering will be an advantage.

Power systems and machines - with the ability to initiate work on digital and solid state techniques.

Control systems - with experience in digital control.

The Department has five full-time courses in Electronics, B.Sc. (Hons.) in Electronics, B.Sc. (Hons.) in Electronics and Communications, B.Sc. (Hons.) in Electronics and Communications, B.Sc. (Hons.) in Electronics and Communications.

Applicants must have a minimum of 10 years' experience in a senior managerial position in a manufacturing or commercial organisation.

Applications should be sent to the Personnel Office, Manchester Polytechnic, 150-152, Piccadilly, Manchester M1 2GB. Closing date: 24th June 1981.

Short courses are organised for industry including an extensive programme of continuing education courses supported by grant aid under Department of Industry MAP scheme.

Research and consultancy work are encouraged in the Institute.

The grades of the appointments will depend on applicant's qualifications and experience.

Applications for the previous vacancies in the Department over the last 12 months should be made new applications for the present posts.

Application forms and further particulars may be obtained from the Vice-Chancellor, Bolton Institute of Technology, Deane Road, Bolton, BL3 5AB, to whom completed forms should be returned by 26th June 1981.

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(in conjunction with the BFSS)

MULTI-CULTURAL EDUCATION RESEARCH OFFICER

Applications are invited for the above post in connection with a 2 year field research project, funded by the British and Foreign School Society and based at the West London Institute of Higher Education, in co-operation with certain local LEAs. The research will focus especially on the work of schools and on the needs of minority ethnic groups.

Salary dependent on qualifications and experience. Further details of the project, which is hoped to commence in September 1981, are available from the Academic Registrar, Gordon House, 300 St. Margaret's Road, Twickenham, Middlesex.

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Courses offered by the Roehampton Institute of Higher Education are in combined studies leading to University and higher degrees.

REGISTRARS

Applications are invited for two posts of Registrar - one at Southlands College and the other at Whitelands College. The Registrar at a College is responsible to the Academic Registrar of the Institute and to the Principal of the College for course enquiries, applications, admissions, examinations and results relating to students admitted to the College. It is desirable that applicants have some experience in educational administration and have either a higher educational qualification or non-tertiary experience.

Salary: NJC/APTC Grade AP5 - £7785 to £8253 per annum, including London Allowance. Hours are 36 per week, annual holiday entitlement is 22 days, and a superannuation scheme is available.

Application forms and further particulars can be obtained from: R. A. Fennell, Assistant Secretary, Roehampton Institute of Higher Education, Richmond Building, Digby Stuart College, Roehampton Lane, London SW15 6PH. Closing date for receipt of applications: Tuesday 30 June 1981.

LECTURSHIP IN LAW
CHELSEA INSTITUTE OF HIGHER EDUCATION

Department of Law
A Lecturer Grade I is required for B.A. (Hons.) Law Degree Course. An interest in Trusts and Constitutional Law will be an advantage. Teaching experience is not essential. Salary: Lecturer I £8034-£8859 per annum.

Application forms and further details available from the Institute Secretary, Chelsea Institute of Higher Education, Victoria Road South, Chislehurst, Kent DA1 1LL, to whom applications should be returned before 26th June 1981. Telephone: Chislehurst 354481 Ext. 222.

ESSEX
County Council

SOUTH GLAMORGAN COUNTY COUNCIL
South Glamorgan Institute of Higher Education (Current)

SYSTEMS AND PROGRAMMING MANAGER

Salary Scale: £8,824 (£12,141 p.a.)

Applications are invited for the above post within the Institute's newly established Computer Unit. The successful candidate will be required to manage the Computer Studies courses within the Department of Physical Science and Technology.

Candidates should possess a degree in a relevant discipline and have experience of commercial and scientific programming and systems design and the ability to advise on programming and systems design and the ability to advise on programming and systems design.

Previous teaching experience and/or appropriate experience would be an advantage.

Application forms and further particulars available from The Personnel Office, South Glamorgan Institute of Higher Education, Cyncoed, Cardiff CF15 6XD, to whom they should be returned with a stamped addressed envelope.

Completed applications should be returned by 26th June 1981.

YORKSHIRE AND HUMBERSIDE ASSOCIATION FOR FURTHER AND HIGHER EDUCATION

Applications are invited for the post of

CHIEF OFFICER

Of the above Association, which is to be established in September 1981 and take over completely from the present Yorkshire and Humberside Association for Further Education when it is dissolved on 31st August 1982. The Chief Officer will be invited to take up his post as soon as possible.

Salary: provisionally the mid point of the scale for Chief Officers Group 3, £16,313 plus 3 increments of £414.

Further particulars may be obtained from: The YHAEA Advisor, Yorkshire and Humberside Association for Further Education, 10, Green Terrace, Leeds LS11 9BX, by whom applications must be received by 31st July 1981.

Colleges of Higher Education continued

Royal Military College of Science

DEAN
A Dean of high academic and professional standing is required for the Royal Military College of Science, Shrivenham, on the retirement in July 1982 of Dr. F.J.M. Farley FRS.

The Dean leads the academic, research and ancillary scientific staff numbering over 200 (including 21 of professional status). Applications are invited from scientists or engineers who have successfully led a scientific or engineering faculty in a university or have equivalent experience.

Salary £42,193.5.

For further details and an application form (to be returned by 10 July 1981) write to Civil Service Commission, Alencon Link, Basingstoke, Hants, RG21 1JB, or telephone Basingstoke (0256) 63551 (answering service operates outside office hours).

Ministry of Defence
Please quote reference: S. 55712.

Colleges of Further Education

STRATHCLYDE REGIONAL COUNCIL
DEPARTMENT OF EDUCATION
FURTHER EDUCATION
ANNIESLAND COLLEGE, GLASGOW

Applications are invited from suitably qualified and experienced persons for the post of

PRINCIPAL
of Anniesland College, Glasgow

The College is group 5 and the present salary is £18,706 per annum.

Candidates must have a degree of a British University or other acceptable equivalent qualification and have held a major promoted post in further education. Experience in industry or commerce is essential. Candidates will be expected to have a wide experience and knowledge of further education, be able to relate to industry and commerce, and be conversant with the role of industrial training boards, the Manpower Services Commission and similar bodies with an interest in further education.

Forms of application and particulars of the post may be obtained from the Director of Education, Further Education Department, Strathclyde House, 20 India Street, Glasgow G2 4PF to whom completed application forms should be returned. Closing date for receipt of applications is 28 June 1981.

EDWARD MILLER, Director of Education

Administration

ilea Inner London Education Authority

INSPECTOR FOR THE YOUTH SERVICE (DISTRICT RANK)

Salary Range £14,256-£15,636 plus £281 London Weighting Allowance

The Authority wishes to appoint a person with senior management experience in the youth service to this newly created post within the Inspectorate team for further, higher and community education. In addition to normal survey and inspection functions, duties will include a major contribution to training and youth workers. Experience in projects for unemployed young people will be particularly welcome.

Application forms and further details are obtainable from the Education Officer (E.O./Estab 18) Room 361, County Hall, London SE1. (Please enclose a stamped addressed envelope.) Completed applications to be returned by 26th June 1981.

ESSEX
County Council

LIVERPOOL UNIVERSITY OF CENTRE FOR LATIN-AMERICAN STUDIES

Applications are invited for the post of Research Fellow in Latin American Studies from suitably qualified postgraduates who have undertaken research in Latin America in the fields of history, geography, literature or the social sciences.

The post will be tenable from 1st October 1981 to 30th September 1982.

Salary will be within the range £6070-£6980 per annum.

Applications, together with the names of three referees, should be received not later than 1st June 1981 by the Registrar, The University, P.O. Box 147, Liverpool L69 3GB.

Particulars from the Registrar and details of the post are available from the Registrar, The University, P.O. Box 147, Liverpool L69 3GB. Please quote ref. R.594/11.110

SHEFFIELD THE UNIVERSITY OF DEPARTMENT OF GEOGRAPHY

Applications are invited from men and women for the post of Research Assistant to work on a research project entitled 'A study of the urban environment in Sheffield'. The post is funded by the University and the Research Councils and is supervised by Dr. A. G. Leaver and Mr. W. J. Bell. Details are available from the Registrar, The University, P.O. Box 147, Sheffield S10 2TN to whom applications should be sent by 26th June 1981. Please quote ref. R.594/11.110

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UNIVERSITY OF SHEFFIELD
THE COLLEGE OF ST. PAUL AND ST. MARY
DEPARTMENT OF TEACHING

Applications are invited from suitably qualified and well-qualified teachers for a post within the Department of Teaching Studies as Principal Lecturer (Research and Development). Candidates should have a special interest in the primary stage of schooling and be prepared to commence duties 1 January 1982 or earlier.

Application forms and further particulars may be obtained from the Registrar, The University of Sheffield, The Park, Sheffield, S10 2TN, telephone 0114 2551515.

Applications should be returned to the Registrar, The University of Sheffield, The Park, Sheffield, S10 2TN, by 26th June 1981.

EALING COLLEGE OF HIGHER EDUCATION
RESEARCH ASSISTANT IN MONETARY ECONOMICS

Honorary Economic graduate required to assist with research project on a monetary history of the UK. A knowledge of monetary economics and some skill in quantitative analysis are essential. An applicant with an honours degree in Economics or a related subject will be given preference. Salary £5,000 p.a.

This post is available from 1 September 1981 to 31 August 1982. Salary £5,000 p.a. plus £1,662 on completion of London weighting.

Application forms and further details from The Chief Administrative Officer, Ealing College of Higher Education, 11, Mary's Road, London W5 5NP. Closing date: 26th June 1981.

HULL UNIVERSITY OF POST-GRADUATE RESEARCH FELLOWS

The Department is engaged in SRS supported research in the field of Mercury Pollution (ICAT) and is seeking a research fellow to work on this project. The successful candidate will be required to have a special interest in the primary stage of schooling and be prepared to commence duties 1 January 1982 or earlier.

This post is available for two years in the first instance. Salary Range: £5,508-£7,555 (under review).

Candidates who expect to qualify shortly may be considered also. Previous experience is not essential.

Applications (two copies) should be sent to the Registrar, Hull University, 68, Victoria Road, Hull HU6 7RN.

ROYAL MILITARY COLLEGE OF SCIENCE
Shrivenham, Swindon, Wiltshire

RESEARCH SCIENTIST IN COMPUTING SCIENCE

The Royal Military College of Science proposes to appoint a Higher Research Scientist/Senior Research Scientist in the Computing Science Branch.

The main duties of the research will be:-

(i) In association with another member of the Department (Dr. Robert Firth) to participate in the Ministry of Defence sponsored implementation of a production quality Ada compiler and environment, and

(ii) to take part in the normal undergraduate and graduate teaching of Computing Science.

The Research Scientist will also be expected either to participate in other Departmental work on programming language implementation, real time systems and information systems design, or to engage in individual research.

The successful candidate will have an honours degree in a relevant subject and at least three years' experience of Computing Science, preferably in the field of programming language design or implementation. Some teaching experience would be an advantage.

The appointment, which will be for a period of at least two years, will be at the level of Higher Research Scientist (minimum of 2 years postgraduate experience, salary scale £6076-£7989, or Senior Research Scientist (minimum of 4 years postgraduate experience, salary scale £7844-£9619, according to qualifications and experience. Salary scales are currently under review.

The College is located on a large site in a rural environment, near the border between Oxfordshire and Wiltshire, in the Vale of the White Horse. It offers many excellent sporting and social facilities. The Department has Dec PDP-11 and Interdata 8/32 computers, as well as some microprocessors, and will shortly acquire a new mainframe to replace its existing ICL 1900.

Application forms may be obtained from the Civilian Admin. Office, Royal Military College of Science, Shrivenham, Wiltshire SN6 6LA; Tel: 0793-762261 Ext 421. Further information may be obtained from Dr. Firth (Tel: ext 463). Please quote reference number HQ 120/1121.

Closing date for applications: 3rd July 1981.

LIVERPOOL UNIVERSITY OF CENTRE FOR LATIN-AMERICAN STUDIES

Applications are invited for the post of Research Fellow in Latin American Studies from suitably qualified postgraduates who have undertaken research in Latin America in the fields of history, geography, literature or the social sciences.

The post will be tenable from 1st October 1981 to 30th September 1982.

Salary will be within the range £6070-£6980 per annum.

Applications, together with the names of three referees, should be received not later than 1st June 1981 by the Registrar, The University, P.O. Box 147, Liverpool L69 3GB.

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THE COLLEGE OF ST. PAUL AND ST. MARY
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Personal

IMMEDIATE ADVANCES
£100 to £200,000
Write to: IMMEDIATE ADVANCES
REGIONAL TRUST LTD
31 Dover Street, Piccadilly
London W1A 4RT
Phone: 01-491 2934

MORTGAGE Remorseless "Top Jobs" of 1981-82: Martin Wainwright, 1981-82: £100,000. Write to: MORTGAGE, Remorseless "Top Jobs" of 1981-82: Martin Wainwright, 1981-82: £100,000. Write to: MORTGAGE, Remorseless "Top Jobs" of 1981-82: Martin Wainwright, 1981-82: £100,000. Write to: MORTGAGE, Remorseless "Top Jobs" of 1981-82: Martin Wainwright, 1981-82: £100,000. Write to: MORTGAGE, Remorseless "Top Jobs" of 1981-82: Martin Wainwright, 1981-82: £100,000

Overseas Continued

UNIVERSITY OF SOKOTO NIGERIA

Applications are invited from suitably qualified candidates for the following posts in the University:-

FACULTY OF ARTS AND ISLAMIC STUDIES

Professors Lecturers I and II
Readers Assistant Lecturers in the following Departments
Senior Lecturers
1. Department of Arabic (excluding Lecturers I and II)
Candidates in all areas of specialisation will be considered.
2. Department of History (for Reader, Senior Lecturer and Lecturers I and II only)
Areas of specialisation required are Islamic History of Africa (West and North Africa), European History and African History.
3. Department of Islamic Studies (for Professor, Lecturers I and II and Assistant Lecturer only)
Candidates should be able to teach and write in Arabic.

4. Department of Modern Languages
Candidates in all areas of specialisation will be considered.
5. Department of Nigerian Languages (excluding Reader)
Areas of specialisation required are Hausa Language and Linguistics; Hausa Syntax and Literature; Languages and Literature in major Nigerian Languages.
FACULTY OF EDUCATION AND EXTENSION SERVICES
6. Department of Education (for Lecturers I and II only)
Areas of specialisation required are Sociology of Education; Psychology of Education; Curriculum Studies and Primary Education.
7. Department of Extension Services (for Professor, Lecturers I and II and Extension Officer)
Candidates for the post of Professor should have experience of applied research in the area of school education such as Universal Primary Education; Extension of the school drop-out children; School supervision and Educational Administration while candidates for the post of Lecturer I and II should have experience in teaching and Extension Education. Those for the post of Extension Officer should either have experience in Extension work or be heads of teacher training institutions.

FACULTY OF LAW
Professors Lecturers I and II
Readers Assistant Lecturers
Senior Lecturers
8. Department of Law
Areas of specialisation required are Common Law and Islamic Law.
FACULTY OF SCIENCE
Professors Lecturers I and II
Readers Assistant Lecturers
Senior Lecturers
9. Department of Biochemistry (excluding Professor)
Candidates in all areas of specialisation will be considered.
10. Department of Biological Sciences (Botany) - (for Lecturers I and II and Assistant Lecturers only)
Areas of specialisation required are Plant Morphology, Pathology, Microbial Physiology, General Botany, Plant Anatomy, Mycology, Phytology, and Phytology.
11. Department of Biological Sciences (Zoology) - (for Lecturers I and II and Assistant Lecturers only)
Areas of specialisation required are Parasitology, Hydrobiology, Fisheries, Malacology, Carcinology, Protozoology, Helminthology, Entomology, Herpetology, Ornithology, Mammalogy, Animal Physiology, Zoogeography, Embryology, Parasitology, and Ecology.
12. Department of Chemistry (for Senior Lecturer and Lecturer I and II only)
Areas of specialisation required are Applied or Industrial Chemistry.
13. Department of Chemistry (for Senior Lecturer, Technologist and Lab. Technologists I and II only)
Areas of specialisation required are electronics instrumentation and Chemistry/biochemistry techniques.
14. Department of Mathematics (excluding Professor)
Candidates in all areas of specialisation will be considered.
15. Department of Physics (excluding Professor) Candidates in all areas of specialisation will be considered.

FACULTY OF SOCIAL SCIENCES AND ADMINISTRATION
Professors Lecturers I and II
Readers Assistant Lecturers
Senior Lecturers
16. Department of Economics and Management Studies (for Professor and Lecturers I and II only)
Areas of specialisation required are Operations Research, Econometrics, Urban and Regional Economics and the Nigerian Economy.
17. Department of Geography (for Reader/Senior Lecturer, Lecturers I and II only)
Areas of specialisation required are Geomorphology, Economic Geography, Human Geography, Urban Geography, and Regional Geography.
18. Department of Political Science and Administration (excluding Senior Lecturer)
Candidates in all areas of specialisation will be considered.

19. Department of Sociology (for Reader, Senior Lecturer and Lecturer I only)
Areas of specialisation required are Sociological Theory/Research Methodology, Social Anthropology, Social Psychology, Demography, Industrial/Urban Sociology and Medical Sociology.

COLLEGE OF HEALTH SCIENCES
Professors Lecturers
Readers Senior Lecturers
Nurses Tutors
20. Department of Anatomy (for Professor, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.
21. Department of Physiology (for Senior Lecturers and Lecturers only)
Candidates in all areas of specialisation will be considered.
22. Department of Pathology (for Reader, Senior Lecturer and Lecturers only)
Areas of specialisation required are Microbiology, Morbid Anatomy and Histopathology and Chemical Pathology.
23. Department of Pharmacology (for Reader, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.

24. Department of Obstetrics and Gynaecology (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
25. Department of Paediatrics (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
26. Department of Surgery (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
27. Department of Community Health (for Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
28. Department of Medicine (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
29. School of Nursing (for Senior Nurse Tutor and Nurse Tutors only)
Applications are also invited from suitably qualified candidates for the posts of Senior Nurse Tutor and Nurse Tutor.

QUALIFICATIONS
Professor
Candidates must be distinguished scholars and must have considerable teaching experience at University level, or institution of similar standing, together with a proven record of personal research and research supervision and must have considerable administrative experience. There must also be evidence of interest in community service. The successful candidate will be expected to organise and develop teaching and research in the Departments, provide academic leadership, and must be able to respond to challenges of a new institution.
Reader
Candidates must possess a Ph.D. and a considerable number of years of experience in teaching and research at University level, or institution of similar standing, with a proven record of personal research output with corresponding publications in reputable journals or original work of a high quality. The candidates must also have some administrative experience and the ability to inspire and guide other researchers. There must be evidence of interest in community service.
Senior Lecturer
The candidates should possess a Ph.D. or its professional equivalent and should normally have at least 3 years' experience as Lecturer I, with substantial research record and publications in reputable journals. The candidates must show evidence of sufficient experience and capacity to be able to lead in the academic leadership of the Department and interest in Community service.
Lecturer I
Candidates must possess a higher degree, preferably a Ph.D. or its professional equivalent and must normally have at least 2 years' experience as Lecturer II or equivalent experience with evidence of satisfactory teaching/research experience at University level, or institution of similar standing.
Lecturer II
Candidates must have successfully completed a Ph.D. degree programme or have an equivalent research output; must normally have at least 2 years' experience as Assistant Lecturer (or equivalent experience).
Assistant Lecturer
Candidates must possess a Master's degree and must show evidence of a capacity to pursue further research work; or have equivalent relevant experience of at least 2 years after graduation (including N.Y.S.C. experience).

Extension Officer
Candidates must possess a Master's degree in Education with at least 2 years' experience in Extension work or have equivalent relevant experience of at least 4 years after graduation.
Senior Nurse Tutor/Nurse Tutor
Candidates should possess the basic Nursing Diploma plus either B.Sc. (Nursing Education) or Sister's Diploma. Grades and points of entry will depend upon the length of experience.
Senior Laboratory Technologist
Candidates must possess an A.I.S.T., A.N.I.S.T., a Higher National Diploma or equivalent with specialisation in electronics instrumentation and at least two years' post-qualification experience in a recognised University, Research or industrial laboratory.
Laboratory Technologist I and II
Candidates must possess an A.I.S.T., A.N.I.S.T., a Higher National Diploma or equivalent with specialisation in Chemistry/Biochemistry techniques. The grade and entry points, will depend on post-qualification experience.

SALARIES
Professor: GL 16 N11,568.00 x 576 - N12,720.00 p.a.
Reader: GL 15 N10,296.00 x 516 - N11,328.00 p.a.
Lecturer I: GL 13 N9,024.00 x 320 - N9,624.00 p.a.
Lecturer II: GL 12 N7,404.00 x 216 - N8,062.00 p.a.
Senior Lecturer: GL 10 N5,760.00 x 162 - N6,732.00 p.a.
Assistant Lecturer: GL 08 N4,668.00 x 162 - N5,640.00 p.a.
Nurse Tutor: GL 08 N3,664.00 x 180 - N4,484.00 p.a.
Laboratory Technologist II

CONDITIONS OF SERVICE
Appointments which are to commence as soon as possible may be permanent or by contract renewable bi-annually. Permanent appointments are probationary for two years in the first instance, subject to a review thereafter. Fringe benefits include pension scheme (for permanent appointments), partly furnished accommodation at rental not exceeding N300.00 per annum or housing allowance in lieu, car basic allowance, passages for family, wife and up to 5 children on appointment, approved leave (overseas leave bi-annually for expatriates) and other conditions as applicable in the University service generally.
Method of Application
Candidates are required to submit 10 typewritten copies of applications and curriculum vitae, indicating full names, post sought, department, date and place of birth; nationality; passport number (where and when issued); current postal address; telephone number; permanent home address; number of children; age and sex of all children; academic/professional qualifications with dates; working experience (giving posts held and duration); present employment, status and salary; details of publications and research; community service; names and addresses of three referees who know you professionally. Candidates are advised to cover their references to forward reports on their behalf under confidential request to: P.A.S. Recruitment, Nigerian Universities Office, 180 Tottenham Court Road, London W1P 0LE, to whom applications should be sent by 22nd June, 1981.

COLLEGE OF HEALTH SCIENCES
Professors Lecturers
Readers Senior Lecturers
Nurses Tutors
20. Department of Anatomy (for Professor, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.
21. Department of Physiology (for Senior Lecturers and Lecturers only)
Candidates in all areas of specialisation will be considered.
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Areas of specialisation required are Microbiology, Morbid Anatomy and Histopathology and Chemical Pathology.
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Reader
Candidates must possess a Ph.D. and a considerable number of years of experience in teaching and research at University level, or institution of similar standing, with a proven record of personal research output with corresponding publications in reputable journals or original work of a high quality. The candidates must also have some administrative experience and the ability to inspire and guide other researchers. There must be evidence of interest in community service.
Senior Lecturer
The candidates should possess a Ph.D. or its professional equivalent and should normally have at least 3 years' experience as Lecturer I, with substantial research record and publications in reputable journals. The candidates must show evidence of sufficient experience and capacity to be able to lead in the academic leadership of the Department and interest in Community service.
Lecturer I
Candidates must possess a higher degree, preferably a Ph.D. or its professional equivalent and must normally have at least 2 years' experience as Lecturer II or equivalent experience with evidence of satisfactory teaching/research experience at University level, or institution of similar standing.
Lecturer II
Candidates must have successfully completed a Ph.D. degree programme or have an equivalent research output; must normally have at least 2 years' experience as Assistant Lecturer (or equivalent experience).
Assistant Lecturer
Candidates must possess a Master's degree and must show evidence of a capacity to pursue further research work; or have equivalent relevant experience of at least 2 years after graduation (including N.Y.S.C. experience).

Extension Officer
Candidates must possess a Master's degree in Education with at least 2 years' experience in Extension work or have equivalent relevant experience of at least 4 years after graduation.
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Laboratory Technologist I and II
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24. Department of Obstetrics and Gynaecology (for Professor, Reader and Lecturers only)
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25. Department of Paediatrics (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
26. Department of Surgery (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
27. Department of Community Health (for Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
28. Department of Medicine (for Professor, Reader and Lecturers only)
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29. School of Nursing (for Senior Nurse Tutor and Nurse Tutors only)
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FEATURES EDITOR

Required by The Times Higher Education Supplement. Applications, from qualified journalists with broad intellectual interests, should be sent to Assistant Personnel Manager (Employment) Times Newspapers Ltd. 200 Gray's Inn Road, London WC1X 8EZ

HONGKONG POLYTECHNIC

Applications are invited for the following posts which are tenable from 1st September 1981:

DEPARTMENT OF DESIGN

Senior Lecturer/Lecturer in Western Design History
Lecturer in Lettering/Printing Technology & Reprographic Preparation

DEPARTMENT OF PRODUCTION & INDUSTRIAL ENGINEERING

Principal Lecturer to teach at least one of the following subjects (up to degree standard): Work Design, Industrial Management, Analysis of Manufacturing Systems and Quality & Reliability. The successful candidate will be required to be in charge of the Department's 'Industrial Management' group which comprises academics specializing in subjects like 'Metallurgy', 'Quality Assurance', 'Engineering Economics' and 'Work Study'.

Principal Lecturer/Senior Lecturer/Lecturer (2 posts) to teach Control Systems Technology to potential Production and Industrial Engineers to commence in September 1981. The successful candidate for one post will be expected to develop and lead the teaching of control systems technology in the Department. He will preferably have recent experience of manufacturing industry and teaching/research background. The successful candidate for the second post will be expected to teach Control Systems Technology in the Department and to assist in its development. Recent relevant experience in manufacturing industry is desirable. The Department is developing proposals for an Honours Degree in Manufacturing Engineering and applicants who could assist in this area are preferred.

INSTITUTE OF TEXTILES & CLOTHING
Principal Lecturer/Senior Lecturer/Lecturers in Clothing Technology/Production
Qualifications and Salary:
Principal Lecturer (HK\$129,800 p.a. to HK\$182,760 p.a.): Candidates should have (a) a degree or professional qualification; and (b) an advanced specialist qualification or extensive experience in a specialised field; and (c) substantial teaching and industrial/commercial experience; and (d) proven administrative ability.
Senior Lecturer (HK\$107,680 p.a. to HK\$163,980 p.a.): Candidates should have (a) a degree or professional qualification; plus preferably an advanced specialist qualification; and (b) at least five years professional experience; and (c) substantial teaching and/or industrial/commercial experience (about 3 additional years); and (d) proven administrative ability.
Lecturer (HK\$81,360 p.a. to HK\$102,180 p.a.): Candidates should have (a) a degree or professional qualification or at least a Higher Technician qualification in the appropriate field of study; and (b) at least five years professional or industrial/commercial experience or at least three years teaching experience or a suitable combination of professional and teaching experience.
Note: C1 = HK\$11.19 on 2.6.1981.

Conditions of Service
Appointment will be on two-year gratuity-bearing contract terms initially. Thereafter suitable appointments may be offered on permanent or renewable terms of service at the discretion of the Polytechnic. Benefits include long leave, subsidised accommodation for overseas appointees and local appointees on a salary of HK\$6,615 p.m. or above; medical and dental benefits; children's education allowance and a terminal gratuity of 25% of basic salary received over entire contract period.
Application forms and further information are obtainable from the Human Resources Management Office, 6 Grafton Street, London W1X 3LB, U.K. Completed application forms should be returned to the same office by 29th June 1981.

UNIVERSITY COLLEGE OF BAHRAIN
POSITIONS
for the 1981-82 academic year
University College of Arts, Science and Education, established in 1976, invites applications for the positions as follows:-
ENGLISH
One vacancy in undergraduate language teaching at Assistant/Associate Professor level. Ph.D. in applied linguistics required, with some university teaching experience and (preferably) publications.
LIBRARY
HEAD LIBRARIAN, Ph.D. in library science. Must have sufficient experience and ability to build a university library based on Library of Congress system. Knowledge of current utilization essential. Fluency in both English and Arabic Languages required.
Minimum salaries for the posts:
Professor BD 8,000
Associate Professor BD 6,000
Assistant Professor BD 5,000
Lecturer BD 4,000
(BD = £1.2 or US\$2.4 approx)
Benefits and allowances:
Free furnished air-conditioned living quarters, full range of medical and health services; substantial allowance for up to three children; extra monthly salary for each year of service; air tickets to and from Bahrain each year for the senior two months paid summer leave; allowance for shipment of personal effects and household goods at beginning and end of appointment.
Bahrain has no income tax.
Contracts are for two years and are renewable.
Candidates should apply in writing, attaching three referees also to write directly to the College on their behalf. Applications should be addressed to: Dr. W.A. Suwaid, Rector, University College of Bahrain, P.O. Box 1062, Bahrain. Tel. 3333333. Fax 3333333.

EGYPT
ELT Adviser
El-Zawia El-Hamra Technical Teacher
Training School, Cairo
Reference: 81 K 28
The job: To develop a 5 year technical syllabus, comprising a 3 year general English followed by 2 year ESP reading skills course for the newly established institution. This will involve adaptation of existing materials written for a similar institution in Egypt; provision of materials for the schools specific needs; training ELT staff to use the materials; Selection/editing of ESP textbooks; outward dissemination of the materials to Kubba and Dar el Salam Technical Schools. Seminar training for ELT staff in these three schools; provision of additional ELT training for technical teachers to study at Diahm T Technical College, Lancashire and general teaching duties for up to 18 hours per week.
Qualifications: Degree, MA in Applied Linguistics or a 1 year postgraduate Diploma in TEFL plus 5 years experience including ESP materials writing and teacher training. Candidates, preferably male, aged 30-50, must be UK citizens with a British educational background.
Salary: £8567-£10,717 p.a.
Benefits: Salary and allowance free of UK income tax; variable overseas allowance according to marital status and salary level; free family allowances; children's educational allowance and holiday visits; free furnished accommodation; outfit allowances; medical scheme; baggage allowance; paid leave.
Contract: 2 years initially with the British Council.
Please write briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post for further details and application form to: Overseas Educational Appointments Department, The British Council, 65 Davies Street, London W1Y 2AA

UNIVERSITY OF SOKOTO NIGERIA
Professors Lecturers
Readers Assistant Lecturers
Senior Lecturers
20. Department of Anatomy (for Professor, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.
21. Department of Physiology (for Senior Lecturers and Lecturers only)
Candidates in all areas of specialisation will be considered.
22. Department of Pathology (for Reader, Senior Lecturer and Lecturers only)
Areas of specialisation required are Microbiology, Morbid Anatomy and Histopathology and Chemical Pathology.
23. Department of Pharmacology (for Reader, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.

24. Department of Obstetrics and Gynaecology (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
25. Department of Paediatrics (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
26. Department of Surgery (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
27. Department of Community Health (for Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
28. Department of Medicine (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
29. School of Nursing (for Senior Nurse Tutor and Nurse Tutors only)
Applications are also invited from suitably qualified candidates for the posts of Senior Nurse Tutor and Nurse Tutor.

QUALIFICATIONS
Professor
Candidates must be distinguished scholars and must have considerable teaching experience at University level, or institution of similar standing, together with a proven record of personal research and research supervision and must have considerable administrative experience. There must also be evidence of interest in community service. The successful candidate will be expected to organise and develop teaching and research in the Departments, provide academic leadership, and must be able to respond to challenges of a new institution.
Reader
Candidates must possess a Ph.D. and a considerable number of years of experience in teaching and research at University level, or institution of similar standing, with a proven record of personal research output with corresponding publications in reputable journals or original work of a high quality. The candidates must also have some administrative experience and the ability to inspire and guide other researchers. There must be evidence of interest in community service.
Senior Lecturer
The candidates should possess a Ph.D. or its professional equivalent and should normally have at least 3 years' experience as Lecturer I, with substantial research record and publications in reputable journals. The candidates must show evidence of sufficient experience and capacity to be able to lead in the academic leadership of the Department and interest in Community service.
Lecturer I
Candidates must possess a higher degree, preferably a Ph.D. or its professional equivalent and must normally have at least 2 years' experience as Lecturer II or equivalent experience with evidence of satisfactory teaching/research experience at University level, or institution of similar standing.
Lecturer II
Candidates must have successfully completed a Ph.D. degree programme or have an equivalent research output; must normally have at least 2 years' experience as Assistant Lecturer (or equivalent experience).
Assistant Lecturer
Candidates must possess a Master's degree and must show evidence of a capacity to pursue further research work; or have equivalent relevant experience of at least 2 years after graduation (including N.Y.S.C. experience).

Extension Officer
Candidates must possess a Master's degree in Education with at least 2 years' experience in Extension work or have equivalent relevant experience of at least 4 years after graduation.
Senior Nurse Tutor/Nurse Tutor
Candidates should possess the basic Nursing Diploma plus either B.Sc. (Nursing Education) or Sister's Diploma. Grades and points of entry will depend upon the length of experience.
Senior Laboratory Technologist
Candidates must possess an A.I.S.T., A.N.I.S.T., a Higher National Diploma or equivalent with specialisation in electronics instrumentation and at least two years' post-qualification experience in a recognised University, Research or industrial laboratory.
Laboratory Technologist I and II
Candidates must possess an A.I.S.T., A.N.I.S.T., a Higher National Diploma or equivalent with specialisation in Chemistry/Biochemistry techniques. The grade and entry points, will depend on post-qualification experience.

SALARIES
Professor: GL 16 N11,568.00 x 576 - N12,720.00 p.a.
Reader: GL 15 N10,296.00 x 516 - N11,328.00 p.a.
Lecturer I: GL 13 N9,024.00 x 320 - N9,624.00 p.a.
Lecturer II: GL 12 N7,404.00 x 216 - N8,062.00 p.a.
Senior Lecturer: GL 10 N5,760.00 x 162 - N6,732.00 p.a.
Assistant Lecturer: GL 08 N4,668.00 x 162 - N5,640.00 p.a.
Nurse Tutor: GL 08 N3,664.00 x 180 - N4,484.00 p.a.
Laboratory Technologist II

CONDITIONS OF SERVICE
Appointments which are to commence as soon as possible may be permanent or by contract renewable bi-annually. Permanent appointments are probationary for two years in the first instance, subject to a review thereafter. Fringe benefits include pension scheme (for permanent appointments), partly furnished accommodation at rental not exceeding N300.00 per annum or housing allowance in lieu, car basic allowance, passages for family, wife and up to 5 children on appointment, approved leave (overseas leave bi-annually for expatriates) and other conditions as applicable in the University service generally.
Method of Application
Candidates are required to submit 10 typewritten copies of applications and curriculum vitae, indicating full names, post sought, department, date and place of birth; nationality; passport number (where and when issued); current postal address; telephone number; permanent home address; number of children; age and sex of all children; academic/professional qualifications with dates; working experience (giving posts held and duration); present employment, status and salary; details of publications and research; community service; names and addresses of three referees who know you professionally. Candidates are advised to cover their references to forward reports on their behalf under confidential request to: P.A.S. Recruitment, Nigerian Universities Office, 180 Tottenham Court Road, London W1P 0LE, to whom applications should be sent by 22nd June, 1981.

COLLEGE OF HEALTH SCIENCES
Professors Lecturers
Readers Senior Lecturers
Nurses Tutors
20. Department of Anatomy (for Professor, Senior Lecturer and Lecturers only)
Candidates in all areas of specialisation will be considered.
21. Department of Physiology (for Senior Lecturers and Lecturers only)
Candidates in all areas of specialisation will be considered.
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Areas of specialisation required are Microbiology, Morbid Anatomy and Histopathology and Chemical Pathology.
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25. Department of Paediatrics (for Professor, Reader and Lecturers only)
Candidates in all areas of specialisation will be considered.
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Senior Lecturer
The candidates should possess a Ph.D. or its professional equivalent and should normally have at least 3 years' experience as Lecturer I, with substantial research record and publications in reputable journals. The candidates must show evidence of sufficient experience and capacity to be able to lead in the academic leadership of the Department and interest in Community service.
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Assistant Lecturer
Candidates must possess a Master's degree and must show evidence of a capacity to pursue further research work; or have equivalent relevant experience of at least 2 years after graduation (including N.Y.S.C. experience).

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Senior Nurse Tutor/Nurse Tutor
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Laboratory Technologist I and II
Candidates must possess an A.I.S.T., A.N.I.S.T., a Higher National Diploma or equivalent with specialisation in Chemistry/Biochemistry techniques. The grade and entry points, will depend on post-qualification experience.

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Overseas continued

NATIONAL UNIVERSITY OF SINGAPORE

TEACHING APPOINTMENTS

Applications are invited for teaching appointments in the National University of Singapore.
While the University will be recruiting staff to all faculties in view of its expansion programme, recruitment will be stepped up especially in the following Departments:

Computer Science, Accountancy, Business Administration, Mathematics, Engineering (Civil, Mechanical, Electrical, Industrial and Systems, Chemical, Law, Economics and Statistics, English Language and Literature, Building Science, Building and Estate Management, School of Architecture.

Candidates must possess a Ph.D. degree, except those applying to the Departments of Accountancy, Law, Building and Estate Management and the School of Architecture should possess at least a Master's degree and/or relevant professional qualifications.

Gross annual emoluments range as follows:
Lecturer: \$822,670 - 44,910
Senior Lecturer: \$839,920 - 97,200
Associate Professor: \$858,410 - 78,020
Professor: \$870,970 - 91,970
(ISTGE 1 - \$84.46 approx.)

The commencing salary is dependent upon the candidate's qualifications, experience and level of appointment.
Staff may be considered for tenure appointment after an initial contract of 3 years. Leave and medical benefits are provided. Under the University's Academic Staff Provident Fund Scheme, the staff member contributes to the fund at the present rate of 15% of salary subject to a maximum of \$540 per month and the University contributes 20% of his monthly salary. For every 3-year contract, the staff member saves between 10-15 months' salary which is tax-exempt. The sum standing to the staff member's credit in the fund may be withdrawn when he leaves Singapore/Malaysia permanently. Staff benefits include a settling-in allowance ranging from \$81,000-2,000, subsidised housing at rentals ranging from \$510-300 p.m., passage assistance and baggage allowance for the transportation of personal effects to Singapore.

For appointments at senior level, short-term visiting contracts may be offered. Additional benefits will include local transport and children's educational allowances.
Further information and application forms are obtainable from either:

Mr R E Sharma,
Director, NUS Overseas Office,
5 Chisham Street,
London SW1, UK.
or:
The Head, Recruitment Unit,
National University of Singapore,
Kent Ridge, Singapore 0511.

UNIVERSITY OF SOKOTO NIGERIA
Professors Lecturers
Readers Assistant Lecturers
Senior Lecturers
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Laurie Sappen